

Profiting by Mistakes

OF COURSE, mistakes are made. To err is human, and the medical man is just as human as any other division of the species. All the commencement-day orations and mutual admiration clap-trap to the contrary notwithstanding, the doctor is characterized by precisely the same frailties of character and of conduct that belong to every human being and to every department of human work. Hence, it goes without saying that he often makes mistakes. That is an axiom, a self-evident proposition, and does not need to be demonstrated.

It is equally beyond question that mistakes are almost, if not quite, as valuable factors in the education of mankind as are successes. Indeed, the achievements of mankind have the double value of intrinsic usefulness and of being the right thing; but mistakes can have no value at all unless they be turned to the advantage of warning and education for the future. Consequently, it is peculiarly the function of an error to be profited by in this manner.

To read the contributions of the great majority of our present-day writers in medical literature—not all of them; for there are, of course, a few great men who know better—one would imagine that they were infallible in their diagnoses and treatment and in

their interpretation of things generally. And the fact is, many an unsophisticated student does gather something of this idea, and later is proportionately discouraged at his own imperfections. Of course, the more charitable construction to put upon the situation is that these writers and teachers regard their mistakes as having no place in the education of those for whom they write or talk. But, such a view is in itself an indication that they do not adequately grasp the nature and *modus operandi* of the educational process.

Every individual worker realizes how much he learns from his mistakes, even from the most practical and commonplace standpoint. Every man with a grain of philosophy in him realizes, further, that mistakes are an inherent part of progress, which consists in a trial-and-error process, so that without mistakes there could not possibly, in the existing state of the universe, be any progress at all. Upon both these grounds, there should be a greater disposition evinced by educators and writers to utilize their own personal errors for the education and profit of those whom they address.

To be sure, the thing can be carried to excess; and, like every good thing carried to excess, it would then run to seed. Nobody cares to hear about all the thousand and one

detailed blunders made by any individual, great or little, in the daily pursuit of his calling, just as no rightly constituted person cares to be regaled with a detailed account of the former evildoing of a converted sinner. One does not care for unimportant detail, right or wrong. That savors of egotism on the part of the relator, and wearies the listener. But, the essence of an error and its correction (a fundamentally wrong attitude toward some important truth of science and its outworking into a right attitude), these are useful agencies of education and inspiration in medical science, as in religion.

No disgrace is involved in making mistakes. Certainly, there is no surrender of dignity implied in admitting them and making proper use of them. No considerations of false pride should restrain the contributor to medical literature and medical education from declaring the whole truth about his personal experiences, even though it includes (as it undoubtedly will) the exposure of grave mistakes. If, as we are frequently hearing nowadays, there is need of more genuine frankness as between physician and patient, there is equal need of more genuine frankness as between members of the profession themselves in their presentation and discussion of medical subjects.

Nobody in the profession is expected to know everything or to be infallible. Only prigs are judged by that standard. In science, there is no place for such sentiment. The calm, dispassionate recounting of an error, how it came to be made, and how it was discovered and remedied, is often of infinitely more educational value than the glib recital of a series of apparently faultless achievements.

The best thing for today may not be the real best, as the best for self may not be the best for others, and if it is not the best in the long run, it is not the best at all.
—David Starr Jordan.

THE FIGHT AGAINST VICE

When one pauses for a moment in the conflict and takes an inventory of past and present conditions, he cannot help but realize, if he be a fair and thoughtful observer, that really tremendous strides have been made in the crusade against the sexual evil, especially in our big cities, where of course it has its biggest strongholds.

Much yet remains to be done, to be sure. The victory is not, by any means, won; nay, many of the problems have not yet even been

solved, which stand between us and the way that leads to victory. Nevertheless, war has been formally declared and the forces of reform have been actually mobilized, and several actions have already been fought, while the powers of evil have steadily been pressed backward and put more and more on the defensive. Indeed, it is hardly too much to say that already we have organized vice on the run.

As with many other difficult situations, so with this vice-problem, it is coming about that in the face of determined action several of the apparently unsolvable difficulties solve themselves. The lions in the way become most docile, yielding creatures as Christian boldly approaches them with his drawn sword. Indeed, most of them are mere bogeys, set up by the forces of vice themselves, to frighten away disturbers. This is clearly and reassuringly shown by the report recently issued by the Committee of Fifteen, of Chicago, for the year ending April 30,

One of these specters was the traditional fear, industriously circulated by those whose interest it served, that the breaking up of vice segregation would drive prostitutes into respectable neighborhoods. As the committee properly points out, this is not true to anything like the extent that is generally believed; and, even though true that some professional prostitutes have taken up their abode in residence districts, the respectable and well-to-do neighborhoods are far better equipped to resist and prevent the inroads of vice than are the poor and submerged quarters that long have been victimized by entrenched systems of vice, police-protected and officially maintained.

Another persistent rumor set afloat by the vice-interests is that assaults upon decent women would increase, and have increased, upon the dissolution of the so-called red-light district of Chicago. This rumor the Committee of Fifteen is in a position absolutely to deny and disprove by indisputable statistics; for, the records of the city of Chicago show that in the year 1913—the year following the attack by States-Attorney Wayman upon the segregated district—the actual number of such assaults fell off nearly thirteen percent, while there was an increase in the city's population of more than 70,000.

Over against both these groundless fears, there stands the undeniable and palpable truth, emphasized by the Committee of Fifteen, that "no such villainous system of prostitution can be practiced in any residential district as was in vogue in the red-light

district, where from ten to one hundred women were plying their horrible trade under one roof."

It is interesting and significant to note the foremost fact to which the Committee attributes its epoch-making achievements during the past year. Says this report: "The Committee of Fifteen has dealt such a crippling blow to prostitution as a business enterprise that the vice-interests have come to fear the Committee more than they do any other force in Chicago."

There, we believe, is the key to the whole vice situation, in all of its aspects, past, present, and future. That, more than anything else, is the reason girls go wrong—because someone (not the girls themselves) has a money interest in their going wrong.

The precise ramifications of this organized system of commercial profitng out of traffic in girls have yet to be traced; and they are being traced, through strange and complicated windings. But the discovery that the great sexual evil is a systematized business enterprise is the most important development; and the attack upon the evil in its commercial phases is the greatest coup that the forces of reform have ever achieved. This angle of attack offers colossal difficulties, it is true; but it is the *right* method and will ultimately succeed.

If you would be heard at all, my lad,
Keep a laugh in your heart and throat;
For those who are deaf to accents sad
Are alert to the cheerful note.
Keep hold to the cord of laughter's bell,
Keep aloof from the moans that mar;
The sounds of a sigh don't carry well.
But the lilt of a laugh rings far.

—Strickland W. Gillilan.

SNAKE BITES AND THEIR TREATMENT

The Charlotte Medical Journal for August contains some interesting data upon snake bites and their treatment. Much of the work done in other countries on the venoms is inapplicable here, because our venomous serpents differ from these of other quarters of the globe, in the nature and effects of their toxic secretions. Two principles, however, have been isolated, and most of the toxic properties of the venoms of all serpents depend on one or the other of these, or on their mixture.

In American snakes these two toxins are found, the one being a hemolysin, the other, a vasorelaxant. The former causes dissolution of the red blood-corpuscles, the latter paralyzes especially the coats of the great

splanchnic veins. The leading symptom produced by the first is dyspnea, by the latter, syncope. The varying degree of these presenting themselves in any case indicates the relative proportions of the two principles in the venom.

Neither of these bodies is very enduring in its action, and the problem in cases of snake bites is, to keep the patient alive for a few hours, long enough for the effects to pass off. Any effects remaining after the lapse of twenty-four hours may be attributed to some one of the other principles as yet not specifically studied. But, since all act chemically, and not through the agency of any self-propagating microorganism, the action can not be very enduring.

The writer quoted mentions the inhalation of oxygen as a possible remedy for the hemolysis; but he thinks it unlikely that it could be secured for application in localities where snake bites are likely to occur. We do not see why this should be. In some parts of the country where rattlers abound there are hunting-clubs, and these might well be equipped with oxygen-tanks. Physicians practicing in these places might find this remedy useful in other conditions and worth keeping on hand. No mention is made of arsenic as an antihemolysin, yet, its properties seem to be quite decided in this respect. The arsenate of strychnine comes near the ideal antidote, combining, as it does, remedies for both toxins.

For the vasorelaxant, the writer advocates glonoin, quickly to flush the anemic brain with blood and arouse the activity of the benumbed cerebral centers; atropine, to increase and prolong this action; and strychnine, to enhance the reaction of the system with these, to "take up the slack," and to oppose directly the relaxant action of the venom. Each should be given to the production of full systemic effects.

Alcohol is condemned, as directly increasing the tendency to relaxation of the splanchnic vessels; but it opposes fear—and men die from fear. Far better than this potent and perilous remedy should be the hyoscine-morphine combination, which so speedily removes the sense of apprehension that usually follows accidents and interferes with the surgeon's duties. We do not suggest this as a remedy for snake bites, but rather as a means of restoring tranquility, when that is necessary to save life.

Something might have been added as to the maintenance of the body-heat, the sustenance of strength by hypodermoclysis of

saline solution, the necessity for rest, in order to avoid wasting the little remaining strength, and the local application of potassium permanganate. However, the article in itself contains many useful hints and information the general public and even the profession might read with profit. We imagine that in the Carolinas, where rattlesnakes are not unknown, it may be put into practical trial, and we shall watch with interest for any reports from the field on the results.

I like to think of medicine in our day as an ever-broadening and deepening river, fed by the limpid streams of pure science. The river at its borders has its eddies and currents, expressive of certain doubts and errors that fringe all progress; but it makes continuous advances on the way to the ocean of its destiny. Very gradual has been the progress of its widening and deepening, for it is a product of human ingenuity and artifice, and only skilled engineers could direct the isolated currents of science into the somewhat sluggish stream of medical utility.—Herter.

SEEING YELLOW

Under the above title *The Medical World* contributes a brief editorial on the disposition of certain special students of psychopathia sexualis to see abnormality everywhere. The article to which exception is taken is Victor Mercante's study of life in a convent school. This observer rather absurdly concluded that, since the decorum of the school was irreproachable, there must be something wrong going on under the surface. He objected that the girls went about in pairs, of which one member was a stronger and more decided character than the other!

The World says: "For the love of Mike! What do they expect of the poor girls, anyhow? Start with the determination of seeing abnormality, and nothing escapes. Let the girl go with male companions—aha! With another girl—homosexuality. Alone—there is but one explanation of that! Then, what is she to do? * * * * As a rule, with few exceptions, our girls are clean, wholesome, innocent, free from all knowledge of evil other than the instincts natural to the young animal. The conditions apparent to men like Mercante exist only in the jaundiced mind of the observer."

To which we say a hearty Amen. Men who see evil in everybody and everything are looking through their own soul-mirrors. Those who assert the existence of graft in every public official proclaim themselves as ready to be grafters; those who find wickedness universal are excusing themselves.

Apart from this, there is a general tendency to put on special spectacles. As the ophthalmologist finds every human being subject to difficulties of accommodation, the aurist sees defective ears as the cause of all maladies, the student of tuberculosis has everybody swarming with the bacilli of Koch, and the "cardiologist" fails ever to detect a perfect cardiac rhythm. So the student of ancient religious beliefs and practices sees phallic emblems in every church spire and pillar, yonis in the horseshoe over the door, in the Byzantine window-frame, the priest's stole, the arabesque decorations. Scarcely is there an ornament that can not be tortured into a resemblance to one or the other.

Tolstoi saw in woman's dress and ornament, her graces and accomplishments, her song and her wit nothing but one universal and continual invitation to amours. The grand design of Him who made woman as a help-mate to man was completely forgotten. The charm, the ennobling influence of social intercourse with pure, intelligent women were lost on the rude mujik.

Are there, in truth, two sides to every shield? Then let us look only on the golden one. Good and bad everywhere? We'll take the good then, and leave the bad for whom it suits. We'll pick out the streak of good in every man and woman, and ignore the evil or condone it—surely, were we in the other's place we should not have done as well. So, we may go happily along the world, loved and welcomed; for everybody likes to have the good in him recognized, and to be as good as we see or think him—or her.

A GREAT WORK FOR GENERAL GORGAS

Now, that the Panama Canal has been completed, our journals are beginning to propose new tasks for the great administrators who have carried that enterprise through to success. General Goethals may be sent to Alaska to build the Government railroads that are to develop that immense territory. There is an undertaking which seems big enough for any man. *The Southern Medical Journal* now proposes an equally imposing task for General Gorgas. Our colleague is anxious for a unification of the sanitary services of our Army, Navy, and Public-Health Service into a great department of health, with Gorgas at its head.

We have health-problems in our country worthy of the efforts of any man. For instance, we are told that every year several million people in the United States have

malaria, and that the annual economic loss from this disease is not less than \$100,000,000. Gorgas showed that malaria could be eliminated in Havana and in the Panama Canal zone, and is undoubtedly the man to undertake ridding our country of this disease. Also, could there be a better man to grapple with the problems of tuberculosis, cancer, and with the increasing burden of kidney and heart disease, which, it is held, are largely preventable?

We are glad to lend the weight of our endorsement to the plan proposed by our souther confrère. Not only is Gorgas a great sanitarian, but he is also a great administrator, and therefore just the man for us to place at the head of this movement.

War in men's eyes shall be
A monster of iniquity
In the good time coming.
Nations shall not quarrel then,
To prove which is the stronger;
Nor slaughter men for glory's sake;—
Wait a little longer.

—Charles Mackay.

PULMONARY HEMORRHAGE

This very important subject of hemorrhage of the lung is discussed, in the August issue of *The California State Journal of Medicine*, by R. S. Cummins. In this paper, three essentials are taken into consideration: the condition of the ruptured vessel, the blood-making clot, and the vascular pressure. Rasmussen concluded that the hemorrhage nearly always came from the pulmonary arteries and from small aneurisms. Slight hemoptysis may be from the capillaries. Ordinarily the blood condition is not a factor in inducing or prolonging the hemorrhage.

Wright found that by means of calcium salts he could decrease the time required for clot formation to one-half or even one-fourth. He gave a single dose of 60 grains of the calcium lactate or chloride, which took effect in twenty minutes, reached the maximum effect in forty-five minutes, and would endure for from four to seventeen days.

Absolute rest in bed is of use in so far as it reduces vascular pressure. Food and drink are to be held to the lowest possible point; mild laxative salines should be given to abstract serum; also to eliminate any pressor toxins that may be absorbed from the bowel. Codeine, 1-2 grain every hour, to relieve cough.

Wiggers "splendid" work on drugs designed to reduce blood pressure was mainly done

with drugs that could not do it—digitalis, strophanthin, ergotoxin, pituitary extract, nitrites, and chloroform. Digitalis increased systemic and pulmonary pressure, whether with or without pulmonary hemorrhage. Strophanthin and ergotoxin did the same, without hemorrhage, but did not alter the pressure during pulmonary hemorrhages. Chloroform lessened systemic and pulmonary pressure and slowed respiration; so, Fish was correct in his observation of its usefulness in these conditions. The nitrites lowered systemic pressure with and without bleeding, but increased pulmonary pressure, except late in hemorrhages. The general belief in their efficacy, therefore, probably is incorrect. Pituitary extract raised systemic pressure and lowered pulmonary, both in normal and in bleeding animals. It should be effective, and some favorable observations have been reported.

Here is where our author makes his most glaring mistake—"Atropine has been suggested because of its depressing effect upon the vasomotor system and the relief it gives to the coughing." But, atropine does not depress the vasomotor system; instead, it powerfully stimulates one certain portion of it. To speak of "depressing" this system, is, however, about as specific as that famous analysis a certain chemist once made of a mouse.

There are to be considered the vasoconstrictors and the vasodilators, each of which may be stimulated or sedated. Atropine stimulates the vasodilators, and by so doing increases capillary attraction and impounds the blood in the capillaries. We have repeatedly asked in many medical journals for reports of any case in which atropine failed to arrest any species of hemorrhage, and have as yet had no case reported except where there was not sufficient time for the action of the drug to develop. Give enough atropine to dilate the cutaneous capillaries, and the bleeding must cease, for the reason that the blood is held in the capillaries. As these have a capacity for about 700 times more blood than has the entire arterial system, it is easy to realize that a very slight increase in capillary attraction must materially decrease the quantity of fluid in the latter vessels.

To return to our author. Adrenalin, he argues, must be injurious, as its constrictive action on the vessels must increase blood pressure. We question this conclusion; for, if the constriction should suffice to close completely the arterioles, it must stop

hemorrhage from them. This applies also to digitoxin and to ergot when given in maximum doses. If the latter can shut off the circulation so as to occasion gangrene from loss of blood supply, it should stop arteriole hemorrhages as well. The experiments are not described, but must have been made with smaller doses.

Dr. Cummins here adds a bit of information, for which we should be grateful had he elucidated. Aconite undoubtedly lowers pulmonary pressure, but "the liability of a hemorrhage patient to pneumonia and the frequency of some cardiac disease would certainly limit its usefulness." If any reader will furnish the key to this cipher we shall be duly grateful.

The conclusions point to rest, calcium, and pituitary extract as the remedies. Emetine is not mentioned, although the medical journals of the world are ringing with its raises. It is evident that the author has failed to canvass the available sources of modern data on the subject, or he could hardly have missed mention of this powerful hemostat in the treatment of pulmonary hemorrhage.

The idler, the lounge, the loafer—who respects him? He isn't decent company even for himself. The world has no use for him. He is marketable only to the devil, and the Evil One makes him work long hours and overtime, and at that, according to the Bible, the wages are death.—J. M. Studebaker.

ALCOHOL AND TOBACCO VERSUS LONGEVITY

The venerable superintendent of Walnut Lodge, after a lifetime spent in fighting the curse of alcohol, contributes a notable article to *The New York Medical Journal* upon the effects of alcohol and tobacco on life expectancy.

Doctor Crothers calls attention to the curious divergences of opinion among life-insurance men in regard to the effects of alcohol. Some few insist on total abstinence for first-class risks, others allow a moderate use of beer, wine or even liquors, while a few declare that moderate drinkers are better risks than total abstainers. Evidently the actuaries have not sufficiently studied the problem to arrive at a definite conclusion. The bias powerfully favors the acceptance of risks—the solicitor gets his commissions and the policy-holder pays the losses. The greater the volume of business, the wider these are distributed. So long as the mortality does not exceed the average, why should they let good business that nearly

every other company accepts go to swell the figures of rivals?

About thirty years ago the president of one life-insurance company made some interesting observations on a number of young men who were accustomed to the daily but moderate use of beer. They were the "pictures of health," bright eyes, rosy cheeks, full habit of body; just the men who, if taken ill, should be expected to pull through on their general robustness. Their history was startling—each was seized with some slight ailment—an attack of typhoid fever, a touch of pneumonia, and just when the critical time came the man died of heart failure.

Just when we came upon that item we had a most distressing case that exactly paralleled it. A brilliant young lecturer, one from whom we looked for honor to the school with which he was connected, failed and died of typhoid fever, despite the efforts of the best clinicians in the city. He was never intoxicated in his life, but never went a day without from three to six glasses of beer—never more.

Revenons à Doctor Crothers: The impetus to study alcohol and its effects has come to the scientists largely from the laity. Apparently exaggerated assertions have led to investigation, with the result that very much of the lay indictment has been sustained. Richardson, Horsley, Woodhead, Kraepelin, Mendel, Kassowitz, Magnan, Marvin, Berkley, Davis, Hall, Hodge, Patterson, Kellogg are mentioned as having published books or papers condemning all use of alcohol as a beverage. Doctor Crothers' own studies have been carried on for forty years.

The fascination of alcohol is due to its narcotic action, covering up fatigue and pain, assuaging worry and drowning trouble. Does it ever remove trouble? or disease? remove the causes of either? Does it ever fail to induce its own peculiar changes in metabolism—dehydration, corrosion, fatty degeneration, connective hyperplasia, paralyses, toxemias, gout, nephritis, hepatitis, the catalog innumerable of consequences, physical, psychic, sociologic?

Clinically, Crothers deals with two classes, the alcoholics and the inebriates. The former is a victim of a bad habit, the latter is a neuropath. They should be studied separately.

A prominent life-insurance man made a study of statistics with the view to combating the wild statements of the temperance fanatics. He concluded that in this country alone

from 60,000 to 70,000 persons died annually from the effects of alcohol, and offered this as a minimum. Of those dying of pneumonia in two large cities, over 65 percent were alcoholics. More than half of those dying of cerebral hemorrhage used alcohol. Heart failure, nephritis, fatalities from shock and accidents, tuberculosis, insanity, idiocy, pauperism, crime, and other great degeneracies are inseparably intertwined with alcoholism.

The effects of tobacco have also been studied; but less extensively, as its evils are less manifest and decided. But tobacco also is a narcotic, a relaxant, a paralyzer. Its action differs in degree but not in kind from those of alcohol, opium, and other narcotics. It brings nepenthe to the anxious, but does not remove the causes of worry. It relaxes mental as well as vascular tension, and enables the overburdened to think calmly and concentratedly. Nicotine, the principal alkaloid, is peculiar, in that its continued administration does not produce tolerance as does that of morphine. Notwithstanding the known tolerance of the stomach against tobacco, nicotine, the lethal dose of the alkaloid remains fixed for the animal despite its continued administration.

Heart disease and sudden failure, sclerosis, atrophy, impairment of development when tobacco is used by the young are the objections to this habit that are registered by the laboratory and confirmed by the clinician. Crothers concludes: "It can be stated with absolute certainty that the physiological and pathological effects of tobacco complicate and increase mortality, and its influence on the entire organism is that of a profound concealed poison lowering cell activity and brain control."

The man who succeeds above his fellows is the man who early in life clearly discerns his object and toward that object habitually directs his powers. Even genius itself is but fine observation strengthened by fixity of purpose.—Lord Lytton.

DYSENTERY A SURGICAL DISEASE

Dr. F. R. Kenton, in *The Charlotte Medical Journal* for August, discussing amebic dysentery, used this language: "I have failed to see a well-developed case cured otherwise [than surgically], even though all of the accepted remedies have been exhibited over periods of time ranging from weeks to months."

This cuts out emetine, which has not been before the medical world long enough to be classed as an "accepted remedy" or to be employed for the periods of time mentioned

by Doctor Kenton. But, even as applied to the premetine period, is his condemnation of nonsurgical treatment just and sustained by the facts?

The surgeon is not to be accepted as an authority on medical methods and remedies, and for two reasons: first, he does not know anything about them; and second, the cases that are brought to him are exclusively those in which the general practitioner has failed. Some pessimistic carpers might add that, as long as the surgeon sees a fat fee in his operative cases, while the family practitioner sees a fat dividend therefrom, without trouble or responsibility, neither is likely to have much faith in any other form of treatment. With this loathsome suggestion we take no part nor parcel. We do not believe that the medical profession, or any considerable percentage of it, is so lost to honor and their professional obligations. The argument urging to surgery as a duty to the patient is today strong enough, without the added incentive of pecuniary profit.

We return to our charge: the surgeon of today knows too little of medicine to be accepted as an authority thereon. He has been a general practitioner, away back in the days when calomel-and-jalap, quinine-and-acid, salts-and-senna, and opium-and-camphor comprised the *materia medica*. Of the modern arms of precision, the tremendously-powerful weapons of up to date therapeutics, he has not the glimmering of a conception. Yet, he thinks he knows it all! Every time a doctor brings him a patient for operation, acknowledging that he has "used every known means, and failed," the surgeon accepts the humiliating confession as the expected, and his own sense of superiority over the general ruck of the profession is confirmed.

Were he to wait until the real therapeutists acknowledged defeat, there would be very few surgical triumphs over the drug-men to be recorded.

The possibilities behind drug applications are without limit. We read in the newspapers of the "delicate" operations of the surgeon (they usually take place in the papers, if anywhere); but, who tells of the delicate applications of therapeutic principles to stimulate lagging functions or to moderate excited action, or to eliminate foreign elements that are disarranging the delicate adjustments of the bodily mechanism? We read about the brilliant work of the surgeon who deftly abstracts the thyroid gland or the kidney; but what of the patient, skilful doctor

who slowly coaxes the diseased organs back to healthy conditions and operation?

There is nothing in the whole realm of surgery that is worthy of comparison with the skill that conducts a typhoid-fever patient through the labyrinth of perils to the haven of recovery.

Before emetine was rediscovered by Rogers, we succeeded so nicely in amebic dysenteries that we never once were compelled to call in the surgeon. Clearing out the alimentary canal with calomel and saline laxatives, disinfecting with zinc sulphocarbonate, aiding, by the use of colonic flushes, with weak silver solutions, following with copper arsenite, we did very well, and won the complete satisfaction of our patients. We discovered that the colonic amebæ did not relish a diet of calx sulphurata; that the arsenates of iron, quinine and strychnine gave great benefits; and we folded away in our pocketbooks many a well-earned and gratefully paid bill therefor. Suggest surgery to the patient, and his only answer is a snort of derision.

But the great defect of drug treatment is, not its inefficacy, but the fact that it does not bring its devotee into the limelight; it is not a grand-stand play.

People—men and women—like to brave dangers. In the ballroom, point out the reigning Don Juan—and you can't keep the women from enjoying the delicious delights of conversing with such a terrible monster. Tell the boy it means danger to climb a certain tree, and he'll climb it the first unwatched moment. Cover the bulletin-boards with war news, sound the fife and the drum, and the youth drops hammer and spade, jumps the fence and is off.

Here stands the Man of Blood, the terrible Surgeon, the man to whom all go when other hope is fled, when other doctors have confessed their impotency; in whose hands lies the slender chance left, whose grim presence denotes a peril looming before you, as alluring as the precipice over which you feel the impulse to jump. On the other stands the Physician, who says that by the use of certain methods he hopes to influence the existing conditions, so as to win back to health in the course of time, safely, gently, by following the laws by which Dame Nature operates. Just familiar, everyday things; nothing exciting, nothing picturesque, only commonplace; nothing appealing to the imagination.

Comes the Homeopathist with his infinitesimals, the Christian Scientist, the Chiropractor, the Osteopathist, the practitioners of a thousand-and-one novel and fantastic

methods; and all win a following; not because there is anything in their systems, but because people want something that appeals to their imaginations, that is "different"; that gives them the chance to feel superior and above the commonalty.

Moral—invest your work with mystery; look wise, say little and leave much to the imagination; keep your methods secret; let the impression prevail that you are the master of occult things, the repository of knowledge not patent to the vulgar herd; that in your hands lies the destiny of human beings, the control of human lives; the shears of Atropos are yours. The elixir of life, the restorer of youth, the philosophers' stone, the transmuter of metals, the lore of the alchemist, the dreams of the Pythagorean, the mysteries of Eleusis, all and more are at your command. What you might do if you chose is limitless.

A halo of the mysterious invests you, and a following is insured you!

Believe, and make the world believe, your jaw is set to win:

Believe (belief's contagious) that your ship is coming in;
Believe that every failure is brought about by lack of grit;

Believe that work's a pleasure if you buckle into it;
Believe there's help in hoping, if your hope is backed with will;

Believe the prospect's fairer from the summit of the hill;
Believe, with all your power, that you're sure of winning out;

Believe, keep on believing. they are brothers—Death and Doubt.

Strickland W. Gillilan.

MEDICAL INSPECTORS OF SCHOOLS

One of the finest opportunities as yet extended to the medical profession is presented by the appointment of physicians to inspect school-children, and investigate their accommodations and management. Here is a field in which neither traveling quack nor ebullient druggist can contest our rights. We have here a chance to let the light of modern science in upon school methods, and of harmonizing the teaching with the mental and physical condition of the pupils. May the school-physicians be ready and qualified to make the best use of their opportunities.

What of the backward children? Much teaching during a third of a century has enlightened the writer to the fact that there is a very great difference in the rate at which various youngsters can absorb and assimilate information. This is not more often a matter of varying capacity as it is of the habit of concentration. One man will limit his con-

sideration of a subject to his notes or textbooks, while another will take in collateral matters that take his mind over a much wider range. My experience is that the men who pass the best examinations are rarely if ever, as good in after-life as those who do much worse in class and finals.

There is a wide difference in the capacity of young men as to the height they can climb in acquiring knowledge. Some are able to go any distance up the mount of mental development; others reach their limit at some point along the slope, and any attempt at further development is wasted. Heredity is a feature here: the son of a scholar, himself the child of educated parents, can take on a college course with less effort, and go further, than the descendant of generations of laboring men. Exceptions? Surely; but only exceptions.

A radical defect in our schools of all grades is that all pupils must go the same route and at the same gait, the quick and the dull, the superficial and the profound, the keen-witted son of culture and the child of clods.

The management of the backward: A boy who had failed to keep up with his classes during the regular term was sent to school during the summer to make up the deficiency. This was a mistake. If he could not keep up with the average of his mates, he surely needed his vacation rest more than did they. If the fault was inattention rather than a lack of capacity, his teachers exhibited incapacity as to him. A few pupils are relatively dense as regards certain studies; when their teachers fail to win their attention or to impart the knowledge, there is a lack on the teacher's part. If this is evident in only one or two pupils, they should be transferred to other instructors; if the lack is more general, the teacher should be replaced.

For many years the writer was able to hold the attention of every student in his classes. When he found himself unable to do this except by an expenditure of energy that at the end of the hour left him exhausted, he retired from the rostrum. Why are so many men unwilling to acknowledge the normal condition attending advancing years?

It is not safe to assume that teachers and school-directors are familiar with the elementary principles of sanitation. Many a worthy and devoted teacher has struggled through an hour of headache and inattentive classes, because it did not occur to her to throw open a window. A dead rat behind the sliding door in the fresh-air intake cost a certain family thirty-five dollars in doctor's fees before it

was discovered. The water from the school-well is not necessarily pure because it is clear and tastes well.

As to the defects of eyes, ears, noses, chests, or the difficulty of learning lessons when an empty stomach is clamoring for food, are they not written in the annals of the medical school-inspectors?

Let me know what goes on in a doctor's office, and I will tell you if he is ethical. Let me know the business side of his practice, and I will tell you if he is honest. Let me see his diagnosis cards, and I will tell you if he is a sincere student of medical science. Let me see his treatment record, and I will tell you if he is a skilful practitioner. I care not what office he holds in the organized guild; I care not how much bluff and bluster he displays among his fellows; I care not what method he employs to teach the public his name and trade—I will then know the man.—Doctor Betterman.

PROGRESS OF THE HARRISON BILL

A month ago we expected that by this time the Harrison Antinarcotic Bill (H. R. 6282) would be a law. We regret being obliged to inform our readers that there has been an unfortunate delay and the bill still rests in the hands of the conference committee, the members of which are, Senators Thomas, McCumber, Smoot, Simmons, and Williams, and Representatives Moore, Kitchen, and Hull.

The delay in agreeing upon the final form of this Act is due mainly to differences of opinion with regard to the bearing of the regulations of the bill affecting the medical profession.

Strong influence has been brought to bear upon the conferees to induce them to substitute the language of the House bill, which required that the physician or veterinarian should "personally attend" every patient to whom the narcotics might be dispensed. The Senate bill provided that he should be especially "employed" to treat such patient. It is contended that the phrase, "personally attend," might be construed to require the physician to attend directly and in his own person upon every patient, and that, therefore, in cases of emergency his initiative would be seriously curtailed.

Another, more important, difference of opinion has arisen with regard to the so called "record provision." This was incorporated in the Senate bill, but was rejected before its passage. The druggists are insisting upon the restoration of this provision to the bill, and some of the conferees seem to be seriously contemplating putting it in again. We do not believe, however, that this is

likely to be accomplished. To require the physician to keep a record of every narcotic dose which he might dispense, no matter how small, would involve him in a maze of bookkeeping difficulties that would lead many an honest man into serious trouble with the Government.

We are confident that the conferees will, in their wisdom, see this point and refuse to be led astray by any form of special pleading. Probably some compromise will be agreed upon. At any rate, there is every probability that the bill will soon become a law. Of course the European war and contemplated trust legislation together have created serious complications that have tied up our lawmaking-machinery and may still further delay the passage of this Act.

We would suggest, however, that any physician who is acquainted with or can influence in any way the conferees should do his best in urging the passage of the bill as quickly as possible, and essentially in the form passed by the Senate. It is important that the medical profession should not be handicapped by unnecessary restrictions by demanding personal physical attendance in every instance, nor by the inclusion of the so-called "record provision."

The man who makes a promise which he does not intend to keep, and does not try to keep, should rightly be adjudged to have forfeited what should be every man's most precious possession—his honor.

—Exchange.

RECONCENTRATION IN MEDICAL PRACTICE

It is astonishing with what fatuity and misapplied perseverance so many medical graduates camp on the trail of a city practice, and on the ragged edge of it at that, in the fond hope of some day entering into the heritage of a large and influential position—a vain hope in almost every case where there is not a substantial basis of social or professional influence to start with. In the keen competition and the multitudinous interests of a large city there is but little opportunity of any kind for any except the hundredth man, and for him only if he be backed by exceptional combinations of circumstantial advantage.

And, even assuming that the man of self-contained resources may, by dint of patient and persevering struggle, attain more or less prominence and competency, professional and financial, in the large city it is a serious question whether the game be worth the

candle. It is more than likely—indeed, the personal expressions of those who have accomplished it go to show—that by the time such a status has been attained the things which seemed to make it so desirable in one's young and callow days have lost much of their glamor, and other phases of life and work, in which the city is sadly wanting, have assumed vital and wistful proportions.

Even in the most practical features of medical work, the country offers, in our opinion, a far better field for the able and energetic physician who is dependent wholly upon his own resource and personality. Except for the few men who by fortuitous circumstance occupy the top ranks and pluck the sugar plums of the profession, the fees of the provincial town bear a much more favorable ratio to the expense of living than do those of a great city. The fact is, the fee in the provincial town is nowadays about the same as in a large city; and, while it is true that living expenses have, in many directions, followed the same tendency to equality, there are still many phases of expense in the provincial town that are far more economical than those of the city, and, in a general way, there is not the temptation to "strike the pace" in the one that there is in the other.

So far as the work itself is concerned, the provincial town and its tributary territory afford a much richer supply of actual clinical material to the practitioner than does the large city, except to those few city men who control the facilities of the larger charity clinics. The actual clinical and office-practice of the average provincial practitioner is, man for man, much more numerous and varied than that of his city brother. Especially is this true of specialists, for whom, contrary to the general impression, the provincial town is a far more promising and profitable field; provided, first, that he knows his business thoroughly, and, second, that he depends wholly upon his personal resources.

And, finally, in the fulness and satisfaction of the personal, social life, the career of the provincial practitioner is simply beyond comparison with that of the city man. The good-sized provincial town nowadays has all the social and educational advantages of the great city, while, happily, lacking in those dwarfing and stultifying and vulgarizing influences which obtain in the latter. In these smaller communities, there is room for each man's personality to expand and to tell for its own intrinsic value. Every man's soul is his own, and neither the thumbscrew of

economic competition nor the lash of social exactions makes a worn-out slave of him before he is physically old.

The fact of the matter is, the so-called advantages of the large city for the medical practitioner are largely fictitious. In everything that makes the practice of medicine genuinely pleasant and permanently profitable, the provincial town offers opportunities and promise greatly in excess of the city. In compensation, as compared with expense; in actual clinical material and experience, which at the same time pays for itself; in the independence and personal reputation of a man's work; and in the higher development and expansion of manhood; the provincial town has the large city at so marked a disadvantage that we have yet to meet the doctor who has tried them both that can be persuaded at any price to accept again the city career.

Every citizen should be inspired with love of personal and public hygiene, as were the Greeks. Every physician should be deeply grounded in physiologic medicine and provided with proper facilities for using it practically. Every public health officer should know thoroughly the contributions of etiologic medicine. All efforts should be made to promote the most fundamental needs of society.—Bardien.

NEED OF REFORM IN HOSPITALS

Some time ago, at a gathering of medical men, when the conversation turned upon hospitals, a brilliant young obstetrician of this city, who has a large and growing practice, both hospital and private, said to me that, barring one or two exceptionally well-equipped and well-conducted establishments, he would rather have his patients under his care in a reasonably appointed home than in any hospital in the city.

Naturally, this rather sweeping assertion astonished me, and I asked him for his reasons. They were very simple, and very tersely and forcefully given. He declared that the average hospital was a good deal of a delusion; that to have one's patients in it gave one a false sense of security which the actual state of the case did not warrant; that one naturally relied upon a hospital affording equipment and facilities and service which, as a matter of fact, it did not afford; and that in an emergency one was more likely to be left in the lurch than he would be in the patient's home, where the attending physician himself was sure to forestall such occasions.

I was disposed to think, at the time, that my friend was exaggerating a little; that possibly he was fresh from some disagreeable

experience at some particular hospital, and, like David, he said in his haste, "All men are liars."

However, I kept all these things in my heart, and pondered on them. I kept my eyes and my ears open, likewise my mouth, for I made quiet inquiry here and there among both physicians and laymen who were in a position to know something about the matter; and I must confess that the result of my still investigation is, to persuade me that my friend the obstetrician was not talking in any hyperbolic terms, but spoke forth the words of truth and soberness.

I dislike very much to criticize an institution such as the hospital. That sentiment, however, is just one of the things that is wrong with the whole situation. As an institution, the hospital is surrounded with a halo of sanctity that seems to exempt every individual establishment from ordinary twentieth-century standards of efficiency, and to prevent everybody from venturing even a well-meant word of criticism or suggestion.

The truth is—one gathers it, not alone from his own observations, but from the irresistible consensus of other men's experience—the average hospital is a very mismanaged and maladministered affair. Just where the fault lies, we are not now enquiring. We may enquire into that later. For the present, we are concerned only with pointing out the deplorable fact—a fact which really needs no pointing out to those who have had anything to do with hospitals.

The service, from the patient's standpoint, is worse than a joke. Its culinary department is a thing to make angels weep; it often makes patients swear—and, incidentally, starve. It really seems that all that the hospital furnishes the patient for his twenty-five or thirty dollars a week is, a room to sleep in and meals that he would kick about in a four-dollar-a-week boarding-house.

The trouble is, of course, that the whole institution, so far as the service is concerned, is a training-school; the kitchen, a cooking-school, and everything is done by the cadets; the result to the patient being much the same as getting shaved in the clinic of a barber's college. The only reason why he goes there is, because his doctor tells him to, and the only reason he stays is, because he cannot get away. It would do no good to change, anyway, since all hospitals are about alike in this respect.

All this, however, annoying as it is, is of minor importance beside the unsatisfactory state of affairs from the physician's stand-

point—by which I mean the medical aspect of the patient's interests, which are in the physician's keeping. It is very largely as my obstetrical friend said.

The very points in which the hospital is presumed to be superior to the home are the points in which the average hospital is lacking. Take nursing, for example. Unless a patient engages a special nurse (which, of course, he could just as well do at his home), the nursing is a farce. The "advantages" he derives from the occasional grudging visits of the busy, often irritable, floor-nurse are purely fictitious.

Once, again, I am not pretending to say what or whose is the fault; I am simply stating a fact well known to every physician and patient who has ever had hospital experience.

Virtually every hospital, as presumably every doctor knows, is dominated by a clique; not infrequently by one man. This one man, or the members of the controlling clique, get all the service there is to be got, and the other physicians get what is left. I, myself, only a few weeks ago was denied the use of the operating-room in a certain Chicago hospital, for a good-paying patient, because at the hour I wanted it the boss surgeon of the place would be holding a clinic in the amphitheater and would demand all the available internes and surgical nurses. It was admitted that he did not *need* them all, but he required their presence.

I used to think that the stories told by patients of neglect and poor treatment in hospitals were the distorted fancies of sick minds and bodies; and, of course, some of them are. But, experience and observation have taught me that there is a great deal of substance in them. I could tell, and so could every other man who has placed his patients in the hospital, similar stories; only none of us wishes to make specific accusations against particular institutions or to give the impression that we regard hospitals as total and wholesale failures.

Once in a while some of us encounter, or hear of, serious results of carelessness and neglect. Fortunately, these are not frequent. Still, there is hardly a physician with hospital experience who has not had to stand, more than once, between his patient and the hospital as a protector of the one and an apologist for the other.

My own opinion is that hospitals need more publicity. They are altogether too close corporations. I do not mean that the lay public should break in and control them.

The medical profession must, of course, be in control. What I do mean is, that in their service to the doctor and his patient they should be subjected to the same open standards of competitive efficiency that the modern physician himself is subject to.

This is a matter in which the whole medical profession is responsible to the public. There is a crying need for reform in hospital management and conduct; and it is the business of organized medicine to see to it that such reform is carried out.

Many doctors of high rank are constant financial bamboozlers. Every move is a grandstand play. Every case is a serious case. The call came in the nick of time. Death flew out the back door as the Great Doctor entered the front. Every sore throat is diphtheria; every bellyache appendicitis; every infected finger is blood poison.—Doctor Betterman.

BARREN MARRIAGES

Marriage means the formation of a new family; but, there is no such thing as family without at least one child. No matter how selfish may be the contracting parties, a childless union never is productive of the complete satisfaction and supreme happiness that accompany the rearing of children. The causes of barrenness are worthy the study of sociologists as well as of pathologists. A writer in *The Boston Medical Journal* analyzes forty childless marriages. Out of these, one-half proved to be owing to sterility of the husband. One significant statement is that in four of these, or twenty percent, the wives had been subjected to operations based on the assumption that the women were at fault. If that is a fair specimen of the diagnostic care exercised by Boston physicians, we would suggest that the Council on Education get sharply after Harvard and Tufts.

Of these twenty men sterile, the semen was devoid of spermatozoa in ten, seven had had gonorrheal epididymitis, one was tuberculous, one had double atrophy following testicular mumps, and one had chronic gonorrheal prostatitis; all ten of these sterile men had suppurative prostatitis. Six of the remaining ten had either oligo- or necrospemia.

Citing as our authority King David of Judea, we would remark that the denial of gonorrhea by any man does not exclude the possibility of his having been affected by that remorse-inducing malady. Neither is a single examination decisive in excluding the existence of gonococci; nor does their absence contradict the possibility of their having left

obstructive lesions of the vas deferens. We may safely assume gonorrhea as the cause of barrenness in a man, until another adequate etiology has been demonstrated.

But why must we sit down and do nothing just because the vas is closed, and leave our patient to lifelong sterility? I am one of the small remnant who still believe in therapeutics and who, as physicians, like to be paid for their services and to feel that they have earned their fees.

To those others who believe as I do, I would suggest the adoption of the line of treatment indicated below, while holding myself ready to drop this mode for theirs if they know of any that promises better results.

Saturate the man quickly with sulphides, giving him a grain of calx sulphurata, U. S. P., and a milligram of arsenic sulphide, together, seven times a day, until his perspiration is surcharged with the characteristic odor of sulphydric acid. Keep up this saturation with smaller doses for two weeks. Meanwhile with a hard-rubber uterine syringe inject 5 drops of an oily solution of thymol iodide into the prostatic urethra every day. Keep this treatment up for one month, and then test the semen for spermatozoa—and you may have an agreeable surprise for your patient.

Reformers may come and politicians may go, but every new significant fact and every useful idea lives on forever, a permanent gift to the human race in its struggle toward the unknown goal, to which it is proceeding.—Elmer Gates.

WALKING AS AN EXERCISE

The development of the body should never be such as to obtrude itself upon a man's consciousness. As Henry Drummond well said, one's body should be cultivated to just that point of health and proportion where he does not know that he has a body. The man whose muscles and sinews have been so extravagantly nourished and exploited as to exercise a continual dominant influence upon his mind, clamoring for attention and activity, is just as lopsided and in just as mischievous condition as the one whose forehead bulges at the expense of his limbs and chest. Indeed, of the two, it is highly probable that the latter will accomplish more really useful work in the world than the former.

Furthermore, we do not believe it possible for mental and intellectual advancement to take place in the race without incurring more or less modification of its physical attributes. For one of the essential outward manifesta-

tions of man's intellectual development is that he becomes a tool-making animal, and tool-making is hostile to the preservation of physical faculties, to say nothing of their development, in about the same ratio that it is conducive to mental progress.

However, we believe the majority of men and women, especially in the crowded centers of civilization, where the pressure of competition is keenly felt, are giving themselves over to the other extreme, and are allowing their mental makeup to eclipse altogether the physical in its demands and attentions, to the great detriment of both. It must be commonly evident to the most casual observer, be he physician or layman, that at the present day men and women, particularly the latter, and more especially in great cities, take altogether too little exercise of the right kind, and that walking has fallen into almost universal decadence among all who are not forced by poverty or circumstances to engage in it. No one walks when by any possibility he can ride, even the shortest distance. Women will procure a transfer and wait several minutes for a second car to take them the last two blocks of their journey; nor are men exempt from the same fatuity. Partly from the national craze for hurry, but largely also from the equally national disinclination to physical exercise, walking has come to be a bore, a nuisance, to be avoided on every possible pretext and occasion.

Now, every medical man and physical instructor knows that of all forms of physical exercise walking is *par excellence* the perfect type. It is, in fact, the natural, elemental type, being precisely what the limbs and trunk were made for. In its performance, there is hardly a muscle in the body that is not directly or indirectly called into normal, wholesome play. During its fulfillment, the mind may be absolutely withdrawn from its motor centers and diverted to various pleasant channels. If given free and natural expression, the exercise will determine for itself the proper degree of speed and vigor. No other form of physical exercise exhibits all of these desirable qualities; and no other has so beneficial an influence upon all of the internal functions of the body.

Of all the agencies in the therapeutic armamentarium of the physician, especially of the family physician, who encounters so many cases of chronic and functional disease, none is more frequently indicated than the habit of walking. It should be prescribed for such patients—judiciously, of course, like

any other measure—far more often and insistently than it is. We do not presume to suggest that the physician does not *know* this; however, he is prone to forget about it—hence, this gentle reminder. If the prophet had bid thee do some great thing, wouldst thou not have done it? We know the rest.

Art that is vital demands freedom of thought and expression, wide liberty of outlook and unhampered liberty of communication.—Cicely Hamilton.

BRONCHITIS IN CHILDREN

A boy of four years, in October, has a bad cold, following heavy playing on a cold day, overloaded with clothing, getting overheated and dropping down on the cold ground for rest. Result, a generalized bronchitis, with a temperature of 102 degrees, wheezing becoming tight toward evening, and restless nights. Treatment commenced after the third day, when conditions were little changed, and the malady showed such obstinacy as to induce a diagnosis of chronic bronchitis.

During the day the boy was kept indoors, the house uniformly heated, the air moistened by pails of water on the steam-coils. He took emetine, 1-64 grain, every hour except near meals, to soothe the cough and loosen the sputa, this allaying the mucous engorgement. When the temperature began to rise toward night, we added a defervescent granule (aconitine, digitalin, and veratrine) every hour, to be continued until the cool moist skin and relaxed pulse showed full desired effect; then just often enough to keep this up. Also, he was put in a warm bed, and his chest well rubbed with volatile liniment and covered with warm flannel soaked with oil. For the cough, he was also given a few granules of "anodyne for infants," a capital cough-soother.

He had a good night, and the day following saw the force of the attack broken. Within three days the temperature ceased to rise above normal. The bowels were moved daily by a laxative saline. Ordinarily I am old-fashioned enough to prefer castor oil, which always seems to have a specially beneficial action in children's catarrhs; but this boy simply could not be induced to take it—and he was one of those royal boys who are designed by nature to rule.

The acute symptoms subsided, but there remained a stubborn tendency to continuance and to relapse at the least irritation. So, we ordered an oilsilk vest lined with all-wool flannel, this to be saturated with iodized codliver oil. It was to be worn constantly

all winter. To carry off the "dregs" of the catarrh, he was given lozenges composed of licorice and cubeb, an old-fashioned but effective and very acceptable composition.

Had this procedure proved inefficient, we should have fallen back upon copaiba balsam; however, we dislike to use our strongest remedies at first, especially on little children, which would leave us no reserves in case of failure. Benzoic acid and arbutin also are of value in such conditions, but, having special power over the urinary apparatus, we prefer to use them in cases thus complicated. For instance, the boy's sister, a year older, has a troublesome enuresis; and when she has such a catarrh we give her arbutin.

Here the attack ends, and treatment begins—to prevent recurrences in a child strongly predisposed to bronchitis.

The oil jacket is good; the daily cold bath—a sudden plunge followed by vigorous rubbing—is our best weapon. For a time, while he is convalescing, as the weather is variable, we compromise on hot salt baths with rubbing till the skin is red; with this vital difference, that after the cold bath the child is dressed and taken out, while after the hot application he is returned to a warmed bed, where he at once goes to sleep. This indicates the time for each bath—morning for the cold, bedtime for the hot.

There is no safety, but rather certainty of chronicity, in keeping such a child housed up all winter. The greater the tendency to respiratory catarrhs, the more deadly is house air. The open air, even below zero, is essential. Deference to the mother's fears calls for residence in warmer latitudes, where one may live outside with fewer encumbering garments. The balmy breezes from Mexico's torrid waters are very grateful to such children, and at Corpus Christi people bathe in the gulf every day in the year.

ALCOHOL AS A SURGICAL DISINFECTANT

Reference has been made in these columns to experiments made abroad that seemed to prove the superiority of 70-percent alcohol, over one of higher percentage, when used for disinfecting hands and the skin preparatory to surgical operations. Now F. Ahlfeld, of Marburg, basing on personal experience, maintains (*Zeit. f. Geburtsh.*; cf. *Ther. Monatsh.*, 1914, p. 543) that such is not the case, declaring full-strength alcohol to act eminently bactericidal and to be of great penetration.

Leading Articles

Painless Labor, and How It Can Be Secured

A Method of Preparing the Woman for Confinement

By FINLEY ELLINGWOOD, M. D., Chicago, Illinois

Editor of "Ellingwood's Therapist"; author of "The Treatment of Disease," and "Materia Medica, Therapeutics and Pharmacognosy."

EDITORIAL NOTE.—Every doctor has been asked by women expecting to become mothers if there is not some method of preparation which they can follow—some plan of treatment which will reduce the probability of great pain during labor, and assure a safe, comfortable delivery. Doctor Ellingwood is convinced that there is such a method of treatment, one which can be begun early in pregnancy and be carried out under the guidance of any intelligent physician. He describes that method here.

UNUSUAL as it is for a lay journal to publish a professional article, the June number of *McClure's Magazine*, and later *The Woman's Home Companion* and the *Ladies Home Journal*, contain a strictly professional description of a method for the relief of the pains of childbirth, a method which cannot in any part of its phases be adopted independently by the laity. The procedure described in that article has been followed, it is claimed, for eight years in the University of Baden at Freiburg. This method claims to anesthetize the mother so completely, yet, without influencing other conditions of the system, that the pains of parturition are not observed; and, further, that under this method complications and shock to the mother have been avoided, while the rate of infant mortality has greatly decreased.

The method described consists in the use of scopolamine and morphine in ways that are not at all unfamiliar to the profession; nevertheless, to the lay reader, the article will convey the impression of its being a great accomplishment in science, and one that, from a humanitarian standpoint, will stand out for all time as one of the most important the world has known. The author attributes the discovery of the method to Doctors Kroenig and Gauss, and claims that it can be used only in small hospitals, and then only by those who are fully expert in handling such dangerous and concentrated remedies. The insensibility induced is called the "twilight sleep," and to secure it a great deal of skill necessarily must be exercised. The

patient must be kept quiet, the mind must be diverted from everything except that which the physician desires, and the patient be put into a state of real or apparent unconsciousness.

"In a report of 3600 cases, twilight sleep," this article says, "has caused no injury to the mother; not a fatality is charged to it. The muscular activity of the mother is not restrained. The birth period is not appreciably lengthened, except in those which call for operative interference. No hemorrhages are found to result from the use of the remedies, and the use of the forceps is in part done away with. As a result of the unconsciousness of pain, there is no nervous exhaustion and there are no complications due to nervous irritation, and the patient makes a rapid and satisfactory recovery."

This certainly is a most desirable accomplishment in obstetrics. However, when we come to know that by the use of very simple measures, by taking our patient into our confidence as soon as pregnancy is determined and continuing our observation of her for the entire term, together with the use of remedies well known to the profession, we may accomplish all of these things in a manner so rational, so natural, and so consistent with the operation of every function within the body, we feel more certain than ever that America and its methods of determining exact drug action with the alkaloids and concentrations, joined with definite therapy, really is deserving of some little praise, instead of having all of it bestowed upon our German confrères, as is now the habit.

There is a tradition and belief, based upon a passage in the Bible, to the effect that, because of the sin of the first woman, the statement, "In sorrow shalt thou bring forth children," was intended as a decree that, as a direct punishment, pain was to be the unavoidable lot of every mother forever after. Inasmuch as this curse was pronounced after the great sin, which is said to have inflicted sorrow upon all mankind, was committed, the conclusion is logical and authorized that woman originally was so created as to give birth painlessly to her offspring. Other essential functions of the body are performed in a painless and to a large extent pleasant manner, and, so, it is a rational conclusion that the meaning to be conveyed in the biblical quotation is that the curse of pain in giving birth would attach as the result of the sins that would be committed in every direction and in every mode of human activities—that these would bring about such a physical condition in women that pain at childbirth must unavoidably result.

I believe that there can, and will, be found in nature a cure for every ill when the intelligence of man has determined what that cure is to be. It remains, therefore, for those whom God has blessed with their intelligences to peer into the causes of disease and the action of remedies, to determine and adjust to these perversions of the potential mother's economy, of which bad habits have been the cause, a cure in the strictest sense of the word—a method or methods that shall preserve intact every function of the body and prevent its being disturbed by the unusual—although perfectly normal—condition of pregnancy and labor.

The greatest mystery in science is the mystery of life, its origin, its perpetuation. Motherhood is the working together of the woman with God in such a manner that the physical life of the mother together with the spiritual essence of God shall be put into a new being that is to be newly started upon a course of human existence.

In animals—and in woman in her natural state (which is understood to be a state of physical being unhampered by any of the customs, habits, methods or demands of civilization)—parturition is painless, or comparatively so, and devoid of danger. Women of savage nations bear children without experiencing pain. They live much in the open air, their physical nature is developed almost exclusively and is thus more nearly normal than that of their civilized sisters.

It was the opinion of Huxley that the bearing of children ought to become free from danger as much to the civilized woman as to the savage. I positively believe that to a mother who is physically perfect parturition can be made devoid of danger and almost, or even entirely in some cases, painless.

It is surprising that the belief is general among civilized peoples that the pain and the complications of childbirth usually are unavoidable and that a severe or dangerous delivery is a natural condition; and this opinion is fostered to a large extent by the profession. Being thus so, it is looked forward to by the expectant mother with dire anticipation and dread, as essentially hazardous both to herself and her child; and this fear with which many look forward so influences their mental condition as in some cases almost to unbalance the mind.

Pregnancy and Childbirth Are Physiological Conditions

After an observation of thirty years, I have come to the conclusion, as have many others who have observed in the same lines, that childbirth is not essentially dangerous nor even severe in its processes; that it not only is possible to modify the conditions of labor, but that the woman can be advised and existent conditions so influenced or controlled as to make labor, if not absolutely painless, at least devoid of danger, and an event to be looked forward to without fear.

We must accept the assertion that pregnancy and child-bearing are normal physiological conditions. They are natural organic functions, the same as eating or sleeping or the evacuation of the secretions of the body. In the case of these latter conditions we tolerate no abnormality. Why, then, should we tolerate any variation whatever from the normal in women during pregnancy or at the time of childbirth?

With all our advances in every other branch of science, we have paid too little attention to this important condition. It is an unwarranted mistake for a physician today, in view of the marvelous advance in all things else in the profession, to conclude that this condition cannot be corrected. It behooves the physician—in fact, it is his duty to mankind—to charge his own mind first of all with the truth of the claim that these abnormalities are pathological, unnecessary, and unjustified, and that, if he does not correct them, he is personally to blame for much suffering and, maybe, the death either of the patient or of the child. The physician

must educate himself to detect as soon as it occurs every variation from the normal in the pregnant woman; and we have now the best means for that purpose the world has ever known. Meeting these, as he can if he is correctly informed with the indicated measure or measures, he can do away entirely with them all in large part, and ultimately fully.

So common is the belief of every mother that she must suffer pain and discomfort and a long train of unavoidable symptoms that she submits uncomplainingly, believing that these are unavoidable. It, therefore, is the duty of the physician, not only to educate himself to this belief, but so positively to educate his patients to the fact that, if they place themselves in the hands of a physician at the beginning of the pregnant term, the long train of symptoms is avoidable, that they can enjoy perfect health, can approach the moment of childbirth without fear, can pass through it with no more danger than if sleeping in their own comfortable bed, and can go through all this with full consciousness of every procedure, yet, experience so little pain as to be absolutely unobjectionable to them; and, moreover, that their recovery will be without any untoward incident. In fact, in most cases, so little impression has been made upon them that they are inclined, like the Freiburg patients, to get up immediately and dress.

Unless, however, the patient is fully educated as indicated, she will not carry out the instructions of the physician, and, unless the physician so thoroughly educates himself and becomes convinced of the necessity of following out each train of abnormality for its immediate relief, he will not give the essential advice.

Under the method herein described, each abnormal condition becomes a specific one; and, as soon as conditions become specific and we are enabled to adjust a remedy for the specific condition, we find them to be precisely as other specific conditions—very amenable to treatment. If we fail to obtain this knowledge, the patient has reason to complain most bitterly of our ignorance or negligence.

For our criterion, we must keep in mind the fact that natural labor should be a short, easy act, with muscular effort at expulsion sufficient, yet, devoid of severe pain, and should occupy a period of from two to six hours; the severe pain, if any, occurring only during the actual expulsive effort.

The method, as above referred to, of

Kroenig and Gauss is defective, in that nothing else is taken into consideration but the use of certain anesthetics. We have other anodynes and anesthetics that relieve pain which are greatly in advance of the methods of even the recent past; but the method which I am advocating does not resort exclusively to artificial means, and such dependence course is not nearly as satisfactory or as consistent with life as it is to put the patient into an absolutely normal physical condition, so that disturbed function, distress, pain, and shock are not induced by the processes of labor. Normal health-processes are not interfered with and there is to be no such thing as "recovery" after parturition, as the patient remains in the same normal condition after labor as she was in before, without shock, weakness, nervous irritation or other perversion of any organs or function.

The Natural Versus the Artificial Method

I have had an opportunity of observing, or others have observed for me, more than 1000 cases, and the results of the course to the mother and the physical condition subsequently of mother and child are so far beyond that which anyone inexperienced would anticipate that is is thought by some almost to be miraculous.

The immense superiority of this course over the Freiburg course of exclusive dependence upon narcotic drugs, is, the retaining of a perfectly normal condition, the doing away with nervous and muscular irritation, the preservation of the functions of the stomach and intestinal tract, in fact, the entire preservation of all the normal body functions. To secure such important results, can be no other than infinitely superior to a method that consists only in the alleviation of pain.

A course which demands the intent observation of at least four individuals, watching every detail so closely that the course adopted does not produce death rather than amelioration, cannot but be hazardous. Such a course must be at once considered inferior to the course above described. The former I call the "normal" course; the Freiburg method I call the "artificial" course.

Among the traditions that are seriously at fault, there is one that the father seems to take pleasure in. It is that a new-born child must be a heavy child. Long observation has taught me that labor with heavy babes is correspondingly increased in severity, and that it is not the heavy infants alone that make strong children, nor that small children are essentially difficult to raise. We have all

seen 4-pound babes that did as well in every particular as those that weighed 10 pounds. On the other hand, many infants born with a weight of from 8 to 12 pounds have been as difficult, in every way, to raise as those who were smaller; neither are those that are heavy any more perfect in adult life than those that are light. Pregnancies that are prolonged to ten or eleven months make almost invariably very severe deliveries, because of the increased growth and development of the child.

No physician who has not tried to modify the development of the fetus during gestation has any idea how readily this can be brought about. In fact, so readily can it be accomplished that a physician must be exceedingly cautious about advising his patient, in order that the infant be not insufficiently developed. One of the strong factors in accomplishing this is, the dieting of the mother.

Importance of the Nutrition of the Mother

In the second year of my practice, I had the opportunity to observe the influence of deficient feeding of the mother upon the child. I was located among miners. A strike was declared and for a year there was no work. After the first month, extreme poverty settled down upon the entire community, and for the intervening months almost the entire food of from 5000 to 7000 people was corn-meal and water, with a limited supply of meal. I have always regretted that I did not secure exact statistics of this famine, as I readily could have done. If I had had any knowledge of the use I could have put them to in the future, I certainly should not have neglected it.

The proportion of expectant mothers who brought forth their children alive was very small. Miscarriages were the rule. Of those children who were born alive, very few lived. The food of the mother had been so scanty and covered so small a proportion of the demands of the system of the little one that every child was in an unbalanced condition physically. They were very greatly emaciated. Their bones were long, but were soft. The heart's action was feeble; the muscular contractions were imperfect, but there was, as I now remember, no great number of deformities nor malformations. The defect was a general one. If the deliveries were severe, they were so because of the weakness of the mother.

This observation literally convinced me that a careful feeding of the mother, with a thorough understanding of the demands both

of the mother and the fetus, would produce a child of proper weight, with proper osseous and muscular development, one that could be readily expelled without any interference whatever, with the normal functioning of the vital organs. These facts I have found to be true.

The Question of Diet

In order to make essential adjustment for each mother, we advise that the patient herself enter fully into the consideration. In the first place, a prevailing inclination to acidity is nearly always present, and this usually is due to hyperchlorhydria. I have determined that, if the fruit-acids are administered in a reasonable quantity, there will be a diminution of the secretions of hydrochloric acid and a more normal balance of the entire acid constituents of the gastric fluids. This is quite important with all patients, but much more important with those who are inclined to bring forth large children with overdevelopment, especially with an excessive bony development. With this latter class, the nitrogenous foods must be avoided to a greater or less extent.

While it is common to say that a patient should avoid meat entirely, we do not lay this down as an arbitrary rule, but we do advise these patients to exclude meat entirely, during the latter part of the pregnant period, unless there is a peculiar weakness that can only be overcome by red meats. I have seldom found this to be the case, as white meats, fish, with eggs and milk usually are sufficient and their nitrogenous content is not too great.

Patients in a medium condition are allowed a small beefsteak two or three times a week, unless the specific gravity of the urine is very high. With such patients, we exclude meats, coffee and tea during the early period entirely and only for a short period at a time permit these later. This measure will be found sufficient in most cases; but, there are some extreme cases, especially with women with black hair and black eyes, where the uric-acid tendency is very strong, in which I have found it necessary to keep the patient upon fruit and vegetables alone. Experiments with fruit dieting alone have been carried to such an extent in some cases as to prevent proper ossification of the bone, the infants being born with a structure largely cartilaginous.

It is often found where the infant is born with excessive body development that the mother becomes greatly emaciated; in fact, there are many mothers who give up the

nutrition of certain portions of their system to the child. Occasionally these mothers become very feeble, and it becomes necessary to feed them on concentrated nutrients. Those foods which do not present a large percentage of earthy salts, such as rice, potatoes, eggs, products of wheat, flour, milk, these are essential with this class of patient. For animal food, fish is excellent for these also, as it supplies a fair amount of nerve-food. These patients do well also on a certain amount of corn-meal, as this assists in preventing constipation, which such concentrated food is apt to induce.

The supply of the bony and nerve structures of the infant makes such a demand upon some mothers for the phosphates as to induce spinal irritation or mental irregularities, and in some cases puerperal mania. I had a case which illustrates this fact.

A mother, because of severe headache, had been kept on morphine for two weeks. When death threatened, the woman was placed in my hands for treatment. I let her come out from under the morphine and discovered her to be a raving maniac. She was restored to a normal mental condition within ten days by use of bovine in large doses every hour or the two, the phosphates, milk and eggs, with counterirritation to the spine—which was exquisitely tender.

Regulation of the Mother's Habits

The habits of elimination of the patient must have careful consideration. With some patients, the normal excretion of the skin and kidneys is limited and constipation is almost constantly present. If those foods that contain a large quantity of waste matter, that will stimulate peristalsis, and a minimum of nitrogenous substance, with an abundance of water be furnished, there will be material benefit.

Careful advice must be given the patient concerning dressing. She must not have compression anywhere. There must be but little weight hanging from the waist: the weight must be carried from the shoulders. The clothes must be light, yet sufficiently warm and comfortable. This goes without saying.

Out of door air and sunshine are exceedingly important to pregnant women; cheerfulness of mind, the cultivation of higher ideals, the entertaining of pleasant thoughts and generous impulses, the carrying out of some course of occupation in the home that is in every way pleasurable, all this is of benefit. The patient must have an abun-

dance of sleep—eight or ten hours during the night, while during the later stages of pregnancy she also must take a nap during the day whenever the inclination is strongest. Baths are of vital importance to a pregnant woman, but they should be neither too hot nor too cold, and should not be too greatly prolonged. Her own judgment and sensations must decide.

Advice About Hygienic and Medical Regimen

I am very much in favor of hot sitz-baths during the last three months of pregnancy. If the patient is of rigid and firm muscular fiber, a bath must, early in the term, be taken once in eight or ten days; but, if she is of relaxed and loose fiber and lacks muscular tone, they should be taken less often, should not be long continued, nor as hot. In extreme cases of relaxation, hot baths should be avoided entirely. However, only seldom have I seen that hot sitz-baths induced any other than desirable results.

The use of oil as an external application, for many women, is a source of comfort. Pure olive-oil may be applied over the abdominal muscles when they become very tight or when the skin over the pelvic structure is dry and harsh; the oil may be applied also to the thighs and the external genitals freely. Also, if constipation is present or if there is sluggishness of the liver, with a tendency to slight discoloration of the conjunctivæ, olive-oil may be taken internally. The bowels may be relaxed with occasional doses of sodium phosphate, regularly given.

During the second stage of labor, application of compresses wrung from very warm oil or from hot water are very beneficial in dilating the perineum. Further, if the sac is broken and amniotic fluid has escaped, an injection of warm sterilized olive-oil into the vagina is of material service. Constipation should be overcome by simple measures. The use of liquid petrolatum, or paraffin-oil, is now being found serviceable, but active physics must be avoided. Laxatives must be selected with great care.

I believe that the blood pressure of every patient who is at all inclined to perversions of health during pregnancy should be ascertained once in two weeks, and as soon as 135 or 140 mm. is reached close watch should be kept upon the urine; then, if any evidences whatever of kidney complication appear, these must be met promptly and positively. The first of these indications is restlessness, then backache, slight headache, some insomnia. Violent measures are not justifiable,

but the patient should be dieted carefully and watched closely.

For the backache, hot dry applications may be made by means of an ordinary hot-water-bag, for a period of one to two hours, two or three times in twenty-four hours. The patient should be given gelsemium and macrotys, in fair physiological doses, every two hours. This, in my own practice, is the best combination that I have yet found for preventing kidney complication. Any irritation of the spinal column must be treated with bryonia, in addition to the above, and, if there is much tenderness upon pressure, an application should be made of kaolin plaster or some mild dehydrating agent, to promote the action of the remedies.

If under these measures blood pressure increases, the pulse becomes more rapid and hard, and the patient complains of persistent headache, she must have veratrum in 1-drop doses every two, three or four hours, sufficient to reduce the pulse rate to 65 per minute. This will do away with the headache and also increase the renal activity.

This same remedy—*veratrum viride*—also exercises a most remarkable antagonistic influence upon the toxins, preventing uremic poisoning more often than will any other one remedy of which we have knowledge. Not long ago we had an excellent illustration of the advantage of this remedy, in the case of a patient who once had had eclampsia, and whose sister, a few months before, had died of puerperal convulsions. I saw her one morning at the end of the fifth month of pregnancy. She was most despondent, confident of a fatal ending, although not usually a melancholy patient or one who anticipated trouble.

The edema was quite general, the pulse ran 120 and was very hard, although albumin in only a slight quantity was present in the urine; the characteristic headache was very pronounced; also, there was some liver complication, the patient being slightly jaundiced; there even was some muscular irritation, with considerable twitching of muscular fibers.

Almost the entire treatment of this patient consisted of veratrum in 1- or 2-drop doses, watched carefully. She received a light laxative, while macrotys in small doses for the muscular irritability and the soreness was given. She was dieted in line with the above suggestions, and all worry and anxiety was removed. In three weeks, the evidences of threatened uremia were gone. In four weeks, the patient's condition was normal, and it continued thus up till the time of confine-

ment, which also was normal, and uneventful in every detail.

Other conditions must be met as they occur. These are general rules which you may apply to all patients in the same way. I have studied the symptoms with many other physicians, and we are agreed on the use of certain specific remedies which are found indicated occasionally and which seem to exercise a very favorable effect.

Macrotys and Mitchellia as Specifics

Macrotys not only controls the muscular irritability, but it acts as a pure nerve sedative of a tonic character; which does away both with nerve and muscular irritation at once. Besides, as the remedy has a specific influence, directly exercised, over the entire reproductive function, it seems to modify every unfavorable condition that is apt to be present during labor.

Another excellent remedy is *mitchella*. The influence of this hardly can be defined, but, in combination with macrotys—we are confident—these two remedies do much for the muscular irritability. A result of this, to which we would call the reader's attention, is the fact that, when muscular contractions occur, either during the first or second stages, the patient experiences all sensation of contraction, but with but little, if any, pain. In many of my cases, there has been an *entire absence of pain from muscular contraction*.

I have recently had a most marked illustration of this in a patient who called me one Wednesday night, expecting a confinement at that time, because the apparent muscular contractions all afternoon and evening were so strong. There was, however, no pain nor distress, not even tiny shooting pains. I found the internal os obliterated, the external os, however, was unaltered.

This woman went about her work singing and happy, sleeping every night in an undisturbed and restful manner until Saturday, then the external os was dilated to the size of a silver half-dollar, but as yet not a single labor-pain had been experienced. The child's head had descended until it was pressing lightly against the perineum, but every condition was normal. The os was patulous, all the parts were moist, and further dilatation seemed to depend only upon the breaking of the water-sac. As everything seemed to be ready, I insisted upon her giving up her work and remaining very quiet the rest of the day. All this time she was very cheerful—in perfect health in every way. She ate her regular meals to the full extent of my permission and

was exceedingly good-natured and happy, having no dread whatever of the final effort.

Returning to her a little before midnight, I told her that there was no need of delaying any longer. She then had a slight attack of nausea, but went to bed at my request. Immediately I introduced my finger over the protruding sac, broke the water at the highest point I could reach against the os. I then turned the finger and caught the edge of the os, giving it a firm pull, which brought on a strong expulsive effort. This lasted, with one interval, for fifteen minutes, when the child was born. The mother was in constant good humor and without pain of any severe type whatever, in fact, had so little pain that when I had conversation with her about it a little later she said she had frequently suffered very much more pain from intestinal indigestion and ordinary colic.

Results Often Are Surprising, with Incidental Benefits

This is a history of a large number of the pregnant women that go through this course. In the brief space allotted me in this journal I am not able to extend any other of the points, but there are many of them. However, when the physician learns the essential points and undertakes to apply them to his patients—as he well can do—he is surprised at the strikingly beneficial results. One of my cases, the wife of a U. S. senator, had suffered agonizing pain for five days and nights, with her first child, and threatened she would commit suicide before she would consent to pass through another labor with her second child. I succeeded, when she was three months pregnant, in establishing her confidence in the fact that I could get her through the term and through a labor without undue pain.

She followed my directions carefully. On the morning of the confinement, the painless contractions began about 3 o'clock, awakening her from a natural restful sleep. Later, tiny shooting pains appeared every thirty minutes until 8 o'clock, when I was called. The expulsive contractions were entirely painless. I took precisely the same course with this woman that we had taken with the one above described. I broke the water-sac at ten minutes after nine (as soon as I could get ready), and the child was born, with two expulsive pains, at nine thirty.

The most desirable result of this course is that the mother preserves the normal integrity and perfect functional operation of every organ in the body. She feels as well in an

hour after confinement as she would feel at any time in normal health. It is most difficult to keep these patients in bed, because they feel so well; and, yet, unlike the practice at Freiburg, I insist upon the patient remaining in bed for from eight to fourteen days, in order to preserve the integrity of the organs and promote normal involution. If the patient has previously suffered from prolapse, displacements, uterine irregularities, leucorrhea or other distressing difficulty, I expect these all to be greatly relieved by the confinement, and we are confident that the remedies used promote such a result most materially.

Furthermore, the health of the infant seems to be benefited also by this course. These babies seem to be hardy and robust and to preserve their health under more aggravations. Also, the mother is enabled to nurse them with a full supply of rich, nutritious milk.

In comparing this method with the method discussed in the article first referred to, it seems to me that this course is in every way infinitely superior, inasmuch as artificial measures are not depended upon, but our entire reliance is placed upon natural conditions and upon the preservation of integrity of the organs and their normal functioning. If the Freiburg doctors and others adopting that course would give to their patients some remedy that would do away with undue muscular irritability, such as macrotys and mitchella, which would quiet their patients during pregnancy and relieve each individual condition, it seems to me they would have almost ideal results.

The Hyoscine and Morphine Combination a Great Aid

In this connection, I wish to say a word about the aid to be derived from a judicious resort to the hyoscine, morphine, and cactoid combination. I am confident that, given in small dosage, this valuable combination can be employed with the course of the general treatment which I have advised so as to do away entirely with the irritable and painful conditions that occur so frequently in these cases. It will give a much more satisfactory result than the scopolamine and morphine treatment, without its dangers. This combination can be so adjusted both to mother and child as to produce a smooth, consistent, quieting influence, entirely devoid of danger.

With the conjoint use of the H-M-C and our method, we at once secure the greatest possible condition of comfort. Where there

are tendencies and conditions not fully covered by our method, these are met in the most satisfactory manner by the marked influence of carefully adjusted doses of H-M-C; thus avoiding the dangers of the foreign combination, with all the advantages of the normal conditions existing in the patient from previous care.

I trust I may have interested the readers of this journal to such an extent that they will look into this simple method, that they will educate themselves to believe that startling results can be obtained, and then will endeavor to educate their patients in the same belief that they will adopt this course, if for no other purpose than from a humanitarian standpoint.

It is surprising how seldom the forceps is needed in these cases. So far as I have

observed, there has been not a case of placenta prævia, no case of eclampsia, no case of extreme malposition, and no necessity for the use of the forceps except in a very few of these cases, in my entire experience—which covers more than three decades. I am glad to say also that this course does away, to a certain extent, with commercialism in obstetrics, which is now apparent in the larger number of the hospital cases. I do not feel like condemning the profession at large, but the too often turning, for the increased fee, of every confinement-case into a surgical one has, in my observation in many instances, resulted in a manner that could not be classed as other than actually criminal. If this is a severe statement I can only regret that the statement is true. I am not accountable for its severity.

How to Examine the Rectum

By CHARLES J. DRUECK, M. D., Chicago, Illinois

THE object of this paper is, to bring before the reader the essentials of an examination of the rectal region, and to assist the physician in making an intelligent diagnosis of his patient's ailment, in place of trusting to luck and a "shotgun" prescription in the form of an injection or local application. It is a deplorable fact that many general practitioners overlook details and make but a cursory examination of patients suffering from rectal disorders; indeed, I have had many such patients come to me whom their doctor had not even examined.

Before we can diagnose or intelligently treat disturbances in the pelvis, we must learn not only to inspect and palpate the exterior surfaces, but also to explore its hollow cavities. A thorough rectal examination not merely considers the coats of the last few inches of the alimentary tract, but the digital exploration determines the condition of all the organs and structures within the true pelvis. In gynecology, the rectal examination confirms the vaginal findings, and in diagnosing conditions in the male pelvis it is the only method of actually feeling the parts in question.

I cannot go into details here, but doubtless every physician has on hand cases where the weight of what has been said will be appreciated. The rest of this paper will be limited to the findings in and pertaining to the rectum; but I urge the reader never to forget,

when exploring these parts, that all the pelvic organs are bound together by one grand nerve-plexus, and that nowhere else in the body are there so many nerve impulses. Frequently a robust man is invalidated by direct or by reflex disturbances, while very little pathological change can be found.

The practitioner who wishes to retain the confidence of his patient must examine the rectum as carefully as he would any other part of the body, for the time is past when patients will be satisfied with a placebo. All modern textbooks on surgery find it necessary to incorporate a chapter on diseases of the anus and rectum.

Rectal diseases are always progressive, and an early diagnosis may mean a slight operation and no absence from business, while later the condition may be so aggravated as to confine the patient to his bed for weeks or months. Almost every patient who realizes that he has rectal trouble informs his physician that he is suffering from piles, and, I am sorry to add, many doctors accept the patient's diagnosis and prescribe without ever examining the parts.

The symptoms of rectal abnormalities sometimes draw the patient's attention at once to this particular organ, but again, because of the intimate connection of the rectum and other pelvic and abdominal organs, the symptoms may be so obscure or the onset so insidious that reflex disturbance elsewhere

is first complained of and the patient is treated for disease of some other organ.

While the symptoms may refer in general to this part of the body, they by no means indicate the specific disease. The odor of cancer or the pain of fissure are characteristic, still, they do not in any way indicate any associated condition or disease.

The Preliminary Examination

The preliminary interrogation of the patient should be systematic, so as to cover carefully and completely the whole case without repeating. It is a good plan to let the patient tell his own story, and then for the physician to bring out the patient's age, physical condition and nervous temperament, the duration of the disease and the progress of the symptoms since their appreciation, together with whatever effect they have on the general health. If pain is complained of, ascertain its character, whether it is sharp and cutting, burning or dull and aching; also its relation to defecation, whether it occurs before, during or after the passage of the stool, and whether it is constant or intermittent; and its location, whether at the anus, within the rectum, in the pelvis or in the sacrum, or whether it radiates from a given point. The patient's statement that he has pain in the rectum is too indefinite to be accepted without further questioning.

If there are any discharges, their nature is important, as is also the presence and amount of blood, mucus or pus. If blood is present, find out whether it is dark or bright in color. The sphincters must be investigated as to whether they are relaxed or abnormally contracted, and, if protrusions exist, whether they recede by themselves or must be replaced, and whether their replacement is difficult or painful. It is important, further, to ascertain the character of the protrusion, whether smooth or nodular, hard or soft or covered with rugæ, and whether it is tender or sensitive to the touch, and whether there are any ulcers; also, extrusion occurs only during defecation or the protrusion is continuously exposed or can be produced at will. Any evidence in the general economy of such other diseases as anemia, tuberculosis or syphilis must be taken into consideration; and whether the patient has had gonorrhea or any urethral stricture.

If a female and married, how many children or miscarriages, and was there any rupture of the perineum? Is there any uterine or ovarian pain, any vaginal discharge, prolapse of the uterus or difficulty in urinating?

If a virgin, inquire as to the menstruation, whether regular, painful, scant or profuse.

The occupation or mode of life of the patient may not have been a factor in causing the disease; nevertheless it may be important in mapping out his future mode of living as to habits, environment, and diet. Does he use enemas frequently, or, like the proverbial Irishmen, take his pipe and daily paper to the water-closet with him? Does the rectum feel full after the evacuation or is there a desire for further action? Is there a history of sodomy or venereal disease, or any family history of tuberculosis or cancer?

The examination of any case, medical or surgical, is incomplete unless we go into the family- and personal history. Often it is tedious and much time is wasted on irrelevant matter; yet, frequently it emphasizes idiosyncrasies. For convenience, I have arranged all the important items of the examination in an abbreviated, but comprehensive, form in my record-sheet. I want to emphasize the importance of keeping these records in even the simpler cases.

It is convenient for those treating rectal diseases to have a water-closet adjoining the examining-room, so that patients may empty their bowels just before the examination. When this is not practicable, and only a few rectal cases are seen, a commode, which can be screened or easily pushed aside, when not in use, will serve the purpose. If possible, a cathartic should be ordered taken the day before, and the rectum should be washed out with an enema just before proceeding to examine. This procedure is absolutely necessary when the upper part of the rectum is to be examined, as otherwise, when the speculum is introduced, the field may be obstructed with feces and a thorough inspection is impossible; also, because the straining during defecation brings down hemorrhoids, polypi or prolapsed bowel and thus assists in the diagnosis. Still, even with these precautions, you occasionally encounter a case of fecal impaction where the rectum is lined with inspissated feces.

Occasionally I prefer to make an examination without this preparation, in order that I may find the rectum more in its customary condition, while any pus, blood, mucus or hardened feces may be found the more readily. Small protrusions or prolapses often retract within the anus when the patient walks a little; hence, it is sometimes necessary to examine the patient, on the commode or just after arising, before he takes a step.

All constricting bands, clothing or corsets must be removed or loosened, for they have a tendency to force the bowels into the pelvis. The bladder must also be emptied. It often is necessary to administer an anesthetic to permit of a thorough examination of all parts and to completely relax the sphincter. Gentleness is important in making an examination of the rectum, as thus much pain may be avoided and spasm of the sphincter prevented. Very much also depends upon the skill of the examiner, because sometimes the ordeal may be very painful, and doubly so if carelessly performed.

Only few instruments are required, and only such as every physician has in his case. In examining the upper portion of the rectum, a speculum and good light are necessary. A speculum illuminated with a small electric lamp on a slender shank clamped into position on the ordinary speculum is the most satisfactory, although good direct or reflected light will answer the purpose.

As regards the position of the patient, the exaggerated lithotomy, the Sims, and the knee-chest positions each has its special advantages in particular instances. The ordinary dorsal or the lateroprone position is all that is needed for the lower rectum, although many operators prefer the exaggerated lithotomy position, the patient's hips being elevated by a cushion. The knee-chest, however, is the only position that permits an examination of the higher portions of the rectum or sigmoid flexure. The Sims position, with the thighs strongly flexed, the breast on the table, and the left arm hanging over the edge, inverts the pelvis and allows the contents to fall upon the front wall of the abdomen; the lumen of the rectum tends to gap, and the mucous membrane falls away from the end of the speculum.

This concludes the preliminaries to a thorough rectal examination, and when we have covered these details we have prepared the patient and ourselves for the manual part of the diagnosis.

For the benefit of those who may wish it, I append a copy of the outline I have followed, and suggest that each case be recorded on some such plan, each history naturally requiring emphasis on its individual symptoms.

EXAMPLE OF RECORD-SHEET

Case Number Name Address
 Occupation Age
 S. M. W. Children Miscarriages
 Family History
 Personal history and present illness
 Stool—Character Frequency

Incontinence
 Pain—Character Relation to defecation
 Constant or intermittent
 Discharges—Blood Pus Mucus
 Protrusions
 Condition of the other organs—Generative
 Urinary Abdominal
 Nervous system
 Examination—Inspection Digital examination
 Sphincters Specular examination
 Diagnosis Treatment
 Dismissed Condition

The Systematic Examination

The examination comprises inspection and digital and instrumental examination. Inspection may reveal the conditions which produce various neurasthenic or anemic conditions. The shape of the anus is sometimes important, whether normal, protruded or drawn in (funnel-shaped). The amount of pigmentation about the parts also must be noted. Evidences of abrasions, scratches, pediculi or worms may be seen on the skin about the anus; so, also, signs of inflammation or scars. A prolapsed rectum may be the cause of prolonged vomiting or pertussis. An ulcer, fissure or pruritus may excite rectal tenesmus and also produce scybalous stools. Protruding tumors, condylomata (such as hemorrhoids, polypi or malignant growths) and the like may also be seen and their characteristics noted. Very often a distinct fullness or bulging of the anus is seen where internal hemorrhoids are present, even if they do not protrude. Where epithelioma exists at or outside of the anus, a small piece may be clipped off for microscopic examination, without causing any discomfort to the patient, by applying a little local anesthetic.

After carefully inspecting the anus and perineum, the field may be widened by gently pulling the anus open, a hand being placed on each buttock, the finger-tips pointing toward the anus. If the patient bears down at the same time, a considerable portion of the mucous membrane will be everted; the extent depending upon the relaxation of the sphincters. In this way the lower inch or more of the bowel may be inspected without using a speculum, and a fissure, fistulous opening, gonorrhea in women, syphilitic erosions, eczematous excoriations or pinworms may be brought into view. In many instances, the internal opening of a fistula is situated immediately within the external sphincter; in which case it may be seen by this procedure.

During this maneuver any tender or indurated areas may be mapped out. Fistulous tracts are easily followed up without the use of the probe. In women who have relaxed sphincters, a portion of the interior of the rectum may be everted by introducing the index-finger into the vagina and pressing the rectal walls through the anus. The presence of a discharge issuing from the anus indicates a diseased condition within the rectum; while a sunken ischiorectal fossæ and retracted anus surrounded by a profuse growth of soft hair would immediately suggest malignant disease or tuberculosis within the rectum, with general systemic involvement.

Examination of the Rectum

Digital examination of the interior of the rectum follows inspection, and it is the most important of all the procedures. The practitioner who is familiar with the digital examination of these parts can diagnose better with his finger than by any other way. Fully 80 percent of all rectal disorders may be diagnosed with the finger, and the other 20 percent by the history of the case and a specular examination.

Digital examination not only confirms the opinion regarding the local conditions found by inspection, but also determines other conditions to which the attention may have been directed. The finger should first be swept around outside of the anus to palpate any induration or tenderness, either superficial or deep, which might indicate abscess or fistula.

For internal examination, the finger-nail should be well trimmed and the finger anointed with olive-oil—this not being as easily rubbed off by the sphincter as is soap or vaseline. Whatever lubricant is used must be kept in collapsible tubes, as this is the only way of having a clean sterile lubricant at all times. The cost is little and the advantages great over the old-fashioned jar of vaseline, into which fingers and instruments were repeatedly dipped, thus carrying infection from one patient to another. For esthetic reasons, the rubber-tissue finger-cot may be worn, because it will not affect the sensibility of the touch and may be washed and anointed.

This attended to, the finger is then gently insinuated through the anus, with a rotary or boring motion, the patient being asked to bear down at the same time, and the rectum then is systematically palpated as high as the finger will reach. The introduction will be rendered much easier if the normal direction of the rectum is remembered and the finger is first directed up and forward toward the neck

of the bladder, until the sphincter is passed, and then backward toward the sacrum. The sphincter is very sensitive, and any undue haste or roughness may induce spasm of the muscle, which will make the examination very painful and unsatisfactory. The iliac fossæ should be firmly explored, to determine whether there is any tenderness or tumor. The finger should be introduced its full length, and, by passing the other fingers of the hand back into the intergluteal space instead of doubling them into the palm, an increased reach is obtained; also, if the patient bears down or strains during the examination, one or two inches more of the rectum can be examined.

The condition of the sphincter should be noted: whether it is relaxed, suggesting a debilitated system, cancer or large internal hemorrhoids, which latter weaken the muscle by frequently protruding; or contracted, signifying acute disease in the anal canal, anal fissure or a nervous subject; or whether hypertrophied, denoting chronic disease; or, finally, whether it is atrophied. The spasmodic action should be overcome by slow, steady pressure, as the sphincter is always forcibly contracted upon attempting examination. Frequently the internal opening of a fistula is found, just within the sphincter, as a rough, indurated and sensitive spot which may be elevated or depressed (ulcerated); or the path of the sinus is felt by its cord-like resistance.

If a tumor is felt, its size, shape, location, movability, and resistance are to be ascertained, and, if possible, a small piece removed later, through the speculum, for microscopic examination. Fecal impaction of the rectum or colon has often been mistaken for cancer, polypi, stricture, abscesses, gallstones; and other foreign bodies are occasionally felt. The tumor of appendicitis is found in the right pelvis if the appendix is low, and rectal palpation should be practiced in every case of suspected appendicitis. Malignant disease of the rectum or pelvis, the tumor of intussusception or an infected lymph-gland may also be felt. Induration or constriction of the walls and the condition of the other pelvic organs is to be determined.

Investigate The Prostate

Palpation of the prostate gland may reveal enlargement, induration, tenderness or soft points. The uterus and appendages should always be examined. Vesical irritation is a frequent source of reflex disturbance, hence, the bladder always should be examined. A

calculus may be found to be the origin of the trouble, although no symptoms were manifested. A digital examination through the rectum often assists considerably in diagnosing diseases of the urethra, Cowper's glands, seminal vesicles, bladder, vagina, and pelvic bones; also, tumors and abscesses of the peritoneal cavity, dislocation of the femur, ischial hernia and aneurysms of the gluteal artery. Very little information is gained by digital examination regarding hemorrhoids, except in rare cases where much hypertrophy has occurred in the mucous membrane. Otherwise, the hemorrhoid being covered with nearly normal mucous membrane, gives no differential tactile sensation.

Thus, we see, a digital examination through the rectum is imperative whenever symptoms indicate disease below the pelvic brim.

Upon withdrawing the finger, it may be covered or streaked with blood, pus or mucus, each with its own significance. If a stricture is so small as not to admit the passage of the finger, force should not be used, as rupture of the bowel has followed such an attempt. The cervix, the fundus of the uterus or the prostate gland may be mistaken for a tumor. In rare instances, it may be necessary to introduce the whole hand into the rectum, but, as the walls are so crowded upon the fingers and the folds of the mucous membrane fall in between the fingers, very little knowledge is obtained, while there always is the danger of rupturing the bowel. A laparotomy and intraabdominal palpation is preferable when the disease is high up in the rectum or in the sigmoid flexure. A digital examination carefully performed is not painful unless a fissure is present.

Instrumental Examination

That part of the rectum beyond the reach of the finger may be examined by means of bougies or sounds, although their use is open to criticism and often is contraindicated. Only soft, flexible rubber instruments (Wales's bougies) should be employed, and these must be handled with great caution. They should be hollow, so as to permit the injection of fluid through them into the part beyond, thus dilating the rectum in advance in effacing any folds that might obstruct their introduction.

Too great value must not be placed upon bougies, inasmuch as their field of usefulness is limited, and even in a healthy bowel the sensation of obstruction often is produced, and may be misleading. I have yet to see a student who did not find a stricture the first time he introduced a bougie, because the sound often

impinges upon the wall of the bowel between the folds of the gut; or, it may strike the uterus or prostate gland, or the promontory of the sacrum. There is always danger of a metal or hard-rubber sound penetrating the gut, especially in cancer or ulceration. Sometimes the so-called third sphincter, which is only a semilunar transverse fold of the anterior and the right sides of the rectum, about six to eight centimeters above the anus, may catch the bougie. Normally the bougie may be introduced with care to the middle of the sigmoid flexure. If the mesocolon of the sigmoid flexure is very long, the bougies may be felt on the right side and lead the examiner to think it had perforated the bowel.

The probe has no place in the diagnostics of rectal diseases and very little in the treatment, except in fistula. Even here its value is very limited.

Irrigations and injections are sometimes employed for diagnostic purposes, and are best accomplished in the knee-chest or dorsal position.

The speculum corroborates the digital findings, and aids in the diagnosis where the finger fails; but it by no means supercedes the latter. Resort to it is indicated where obscure hemorrhage, pain or discharge is an important symptom. The internal openings of fistulas may be seen, especially if the discharge escapes during instrumentation. Internal hemorrhoids usually drop into the instrument and are easily seen.

The decision as to which is the best speculum depends upon which one the operator is more familiar with. Each instrument is constructed differently, but the more rectal examinations one makes, the less he will use the speculum. The smooth blade bivalve causes much less pain than the wire blades, but it obstructs the field of vision and exposes only a small area at one time; and this speculum must, therefore, be rotated.

The cylindrical speculum permits of the most thorough work. With the patient in the knee-chest position and a speculum five inches long and one inch in diameter, the whole length of the rectum may be examined. Such a speculum is provided with an obturator to facilitate its introduction, which should be accomplished without much pain. When the obturator is withdrawn, the air rushes in and dilates the bowel, and the whole rectal wall may be inspected by moving the introduced end about, at the same time gradually withdrawing the instrument. The mucous membrane directly in front of the speculum is flattened out, and can be viewed easily by

gently pushing the speculum up after the obturator has been removed.

By putting the patient under the influence of a general anesthetic, many of the obstacles to the examination are removed and the field may be explored thoroughly; the sphincter completely relaxes, pain is obviated, and in such cases it is well to be prepared to do any necessary surgical treatment in order to avoid a second anesthetic. When the patient is anesthetized, an ordinary flat retractor frequently makes a very satisfactory speculum. A cylindrical speculum ten to thirteen inches long may be introduced, and the sigmoid flexure explored; but, as the great majority of rectal troubles are near the anus, a short and wide speculum is preferable.

When the patient is in the knee-chest position, the chest should be well down on the table. All constrictions at the waist must be removed.

In many instances, owing to local disease or reflex nervous excitement, we find the sphincter abnormally contracted, making an examination very painful, and often impossible without some previous preparation.

An old-fashioned way of overcoming these difficulties was, to anesthetize the patient, and, with the thumbs introduced through the anus and then drawn forcibly out to the ischial tuberosities, to tear and strain the sphincters until paralyzed. Such a procedure is unnecessary, and should be relegated to the surgical scrap-heap.

Pneumonia: Some Clinical Lessons

By J. M. FRENCH, M. D., Milford, Massachusetts

EDITORIAL NOTE.—Every physician has interesting experiences which might be used to illustrate diagnostic and prognostic truths, and therapeutic possibilities—yes, even social and economic injustice. Doctor French has done us all a service by describing some of his own. May others be encouraged to give reports of their own work, especially in its practical aspects. Next month Doctor French will take up the treatment of pneumonia.

WHEN I began the practice of medicine, pneumonia was still quite commonly regarded as a strictly local disease—an inflammation of the lungs, and nothing more. The germ-theory was then in its infancy and was applied more to surgery than to medicine. I well remember the first case I saw and how it impressed me with the idea that some cases, at least, of pneumonia were caused by germs; were systemic infections, rather than mere local inflammations. The constitutional symptoms were more marked than the local ones, the course of the disease was insidious, the resulting prostration extreme, and the vitality of the patient soon exhausted. I have seen many similar cases since and have learned to dread them, for they nearly always are fatal. Since that time we have learned to consider all pneumonias as germ-diseases, but there still remains a great difference in the type of different cases.

Pneumonia in the Aged

Death from pneumonia is almost the natural mode of death for the aged: more old people die of pneumonia than of any other single disease. So well is this understood, that when a person past sixty is attacked by pneumonia recovery scarcely is expected. Experience proves, however, that there are

many exceptions. Not infrequently do we find old people enduring and overcoming disease which would prove fatal to the ordinary young person. Especially is this true for pneumonia. The very fact that a person has lived to be sixty, seventy or eighty years of age is proof positive of a good degree of vitality and endurance. The man who is built to last a hundred years, or even three score and ten must, necessarily, possess sufficient vigor and resistance to disease to carry him safely through many a hard place in life that would carry off the average young person. The practical lesson is, never to despair of a pneumonia patient because of his age, provided other conditions are favorable.

An Accidental Death

I once had as a pneumonia patient, a widow of about seventy-five, whose physician was absent from town and who had selected me as his substitute. The attack was a fairly typical one and not exceptionally severe. The different stages came and went without giving me any especial cause for alarm. The crisis passed safely, the patient began to improve rapidly, and recovery bade fair to be uneventful. In a few days her lung was nearly cleared up, her mind was clear, her appetite was good, her strength was improving, and all the symptoms were favorable.

Under these circumstances I said to her one morning: "Now, Mrs. B., you are getting along so finely that there will be no need for me to see you tomorrow, but I shall come the day after." So, I went to my home and took the train for Boston, where I attended to some matters of business. When I reached home in the afternoon, the woman was dead.

Soon after I left her—perhaps encouraged by my favorable comment on her condition—the woman got out of bed and, saying how much better she felt, walked to the nearby window and looked out upon the garden (it was in the month of June, I think), remarked how fine the corn was looking and how fast everything was growing; she declared she felt better and was growing stronger every day, walked into the adjoining room and looked around for a minute, then went back and sat down on the bed. But, the effort had been too much for her; she was seized with a severe attack of heart failure and in a few minutes was dead.

Now, this was not strictly a death from pneumonia, but, rather, an accidental death. The patient had nearly recovered from her pneumonia, and had she kept flat on her back in bed until such time as I gave her permission to get up she would undoubtedly have fully recovered in a short time.

However, this lesson was not lost on me, and doubtless has enabled me to save a number of other lives since that time; for, I felt that I was in some measure responsible for not having warned her of the danger of getting up before she had the doctor's permission. And then and there I resolved that such a thing should never happen in my practice again. From that day to this, I always take care to lay down the law to all such patients: that they are not to stir off the bed, in some instances not even to sit up or raise the head, until I tell them it is safe to do so. When they act as though they thought I were "too fussy," I unhesitatingly tell them the story of the untimely death of Mrs. B., and that seldom fails to make the desired impression. Some people need to be soundly scared in order to keep them within bounds, and I verily believe I have saved some lives by telling this story.

A Walking Case

One morning a neighboring physician telephoned me to attend a patient for him while he was absent a few days. I went and found the man up and dressed and walking about the room and the house, although he had a temperature that was several degrees

below normal, a lung that was solid, and a heart that was overburdened almost to the point of collapse. He had just passed the crisis and was at the point of death even under favorable circumstances. I found that through it all his physician had not been able to impress him with the seriousness of his condition sufficiently to keep him in bed, but that he had kept out of bed all the while, or at least for most of the time.

I tried my best to impress him with his danger, even telling him the gruesome story of Mrs. B., but this time to no avail. I gave him strict orders to go to bed at once and not to stir off his back until I gave him leave. He went to bed but did not stay there. A little past midnight I was sent for. I went, and I staid with him until he died, which was shortly after my arrival. The family told me that less than two hours before he passed away he got up from the bed and wandered out into the kitchen, and staid there for some time before he would go back to bed. I have labeled this a "walking case;" but it is only another illustration of the acknowledged fact that the chief danger in pneumonia is from failure of the heart, and not from the lungs directly.

A Death from Lack of Nourishment

I had for my patient, a few years ago, a man who had been my neighbor and friend for years. He was an estimable man, a good citizen, and a man of more than ordinary intelligence in many ways. He was an authority on matters of personal hygiene, writing many interesting articles on that subject. His two particular hobbies, however, were fasting and deep breathing.

My friend's constant cry was, "Eat less and breathe more." When anything was the matter with him (and this was not infrequently the case, notwithstanding his knowledge of hygiene) he treated himself by cutting off most or all of his usual scanty supply of food and indulging in the luxury of storing an extra supply of air in his lungs. Especially was this his favorite method of treating a common cold—an ailment from which he considered it quite disgraceful to suffer, but by which, of all things, he was frequently disgraced. If he did not succeed in breaking up his cold by fasting, he was optimistically confident that it was only because he did not begin the fasting early enough or did not carry it sufficiently far. As a natural result of these practices, he had the lean and hungry, half-starved look which is common to the fasting fraternity the world over.

One bitter day in midwinter the man came home from Boston suffering from a severe cold, and the attack did not yield to his usual fasting-treatment. Soon he came to me, as was his habit when fasting and physicking failed to relieve him, and I took him in hand. But he had no more resisting force than a piece of water-soaked brown paper. His system was below par, the result of lack of proper nourishment. He died, in a few days, of pneumonia and innutrition, a victim of his own vicious system, a pitiful example of an underfed and poorly nourished man, with no resisting power and no vitality, yielding where he should have conquered, dying where he ought to have lived.

What Fresh Air Will Do in Pneumonia

Another illustration. The patient was a feeble woman of between sixty and sixty-five. She had been growing worse all day, and it was nearly night when I was telephoned for to come the second time that day. When I arrived, I found she was still failing, and the friends were anxious to have me stay with her through the night, or as long as it might be necessary. It was in midwinter, but the rain was falling fast, the ground was covered with slush, and there was a brisk wind. Altogether, it was a thoroughly uncomfortable night outside and in. The sick-room was a small one, a corner room with two windows, each of them a double window made to keep out the cold. It was not an ideal room for a pneumonia patient, but we had not been able to find a better one.

The woman was more or less delirious, her pulse was rapid and feeble, and the breathing was oppressed, labored, and irregular. The heart was hard pressed, and the blood was not being aerified as it ought to have been. She was pulling for breath, yet, the air wasn't fit for her to breathe, coming, as it did, entirely through the door from the living-room, with not a breath from out of doors. But outside was the rain, and the wind, and the cold. It wasn't a bright prospect; however, the longer I watched her, the more I saw that the patient must have air if she was to have any chance to live.

When I had settled in my mind just what I wanted to do, I called her son, who was a man of intelligence, and explained to him that his mother had nearly all of one lung solidified, which left her only about half her usual breathing-capacity, so that she was in danger of dying for the lack of enough oxygen to purify her blood, and that, if we wanted to save her life, we must see to it that she had a

good supply of the freshest and purest air we could possibly find for her. I then directed him to get tools and take out one of the double windows and let in the fresh air, even though it was raining hard. Of course, he questioned me and was anxious lest she should take cold and die as the result. But I told him—and he could see—that the prospect was that she would die as she was and that my plan would give her a chance for life. I also assured him that I should take all the responsibility and should stay and watch her as long as was necessary. So, we first put up a blanket between the sick woman and the window, to keep the wind and rain from blowing too hard upon her, and then took out the window-sash and let the air in, rain and all. And plainly it was to be seen by us all that in a very few minutes the sick woman began to breathe more easily, to look better, and to rest more quietly. It was the turning-point, and there was no question in the minds of any of us but that the fresh air was the remedy that caused the improvement. She recovered, and she is still living; and I have always given that open window the credit of having saved her life.

Supporting the Heart

I have learned through an every-day experience of thirty-six years to realize the great importance of proper measures for supporting the heart in all cases of pneumonia. I can recall many instances which have helped to impress this upon my mind, but not one that stands out above the rest. Indeed, it is a lesson which has to be learned by little and little, year after year. It is taught, not alone by the extreme case where life is barely saved, but by the average one, where the danger is kept far in the background by the same treatment.

I well know that the "authorities" tell us not to use heart-tonics until the heart begins to fail. My own experience, however, has convinced me that the best way to save the patient is, to avoid the beginning of any such symptoms by the careful use of the proper remedies in minimum doses early in the disease, rather than to wait until serious symptoms are manifest and extreme measures are necessary. Mind you, I do not advocate giving heart-tonics when there is no especial danger of heart weakness; still, everyone knows that this is the greatest danger in pneumonia, and that, when once the diagnosis of pneumonia is made, you need to look out for the heart even more carefully than for the lungs. And, if you know what is coming, why not prepare for it and, if possible, prevent

it? By following this plan, it is comparatively seldom that the severer forms of heart trouble manifest themselves.

I am aware that this is contrary to the teachings of the authorities; but, if we have no ideas of our own, there certainly is no reason why we should use up the pages of a medical journal in repeating the teachings of others. From many sources and from long experience, I have become convinced of the utility of this mode of treatment, and of its absolute freedom from doing harm under any circumstance. I know they tell us it is simply like putting a whip to a tired horse and merely increases the heart's weakness. Nevertheless, to me it seems only like giving food to keep up the strength.

Pneumonia Can Be Aborted

A considerable experience has proved to me that many attacks of pneumonia can be aborted by early and proper treatment. When I say, they can be aborted, I mean that a case which in its early phases resembles in all its clinical features an ordinary pneumonia, and which you have every reason to expect will, if left to its natural course, go through the usual stages of that disease, with the chance of a fatal result, many times may, by prompt and active measures, be made to end its course without going through the usual stages, and, so, without the consequent danger to the patient. Of course, there are those who claim that, unless the disease does go through the three classic stages of congestion, consolidation, and resolution, it is not pneumonia. If this be granted, then, of course, pneumonia can not be aborted. It is not worth while to quarrel about a mere difference in the way of expressing an idea. The fact remains that the thing can be done, and much serious illness saved, by whatever name you may please to call it.

There is no patent process by which this can be done, however, no one method which can be depended upon, to the exclusion of all others. But there are a number of recognized methods that will produce this result under favorable circumstances. Of course, not all incipient attacks can be aborted, even by the earliest and most approved methods of treatment; and the reasons why this is so may be summed up as follows:

1. There may be a lack of vitality in the patient, resulting from age, debility, dissipation or native lack of vigor; and, as a result of this, the system does not react properly to any method of treatment.

2. There may be an unusual intensity of

the infection; that is, the attack may be an extremely severe one, owing to the toxic action on the system of the pathologic cause of the disease, so that the vital forces are overwhelmed by the first onset of the disease.

3. The treatment may not be begun sufficiently early, or it may not be the proper treatment for that purpose, or it may not be carried out with sufficient vigor and thoroughness.

These are the reasons why some cases are aborted, while many are not, and can not be, in the present state of our knowledge. It is probable that the percentage of successes may be increased by a careful study of the peculiarities of the patient, the nature of the disease, and the effects of the different forms of treatment.

The Importance of Good Nursing

In the treatment of pneumonia, especially after the disease is fully developed, good nursing often is of quite as much importance as is medical treatment—and I do not know that I should quarrel with anyone who might claim that it was even more so. The doctor who has to treat a serious case of pneumonia without having the assistance of a skilled nurse is laboring under a great handicap.

Mrs. G. was a woman past sixty, and I think she was the sickest person with pneumonia of any patient I ever had and who recovered. For twenty-four hours following the crisis she lay apparently at the point of death, with symptoms so serious that I despaired of her recovery. This was in the early years of my practice and before the days of trained nurses in country practice. But I had the advantage of having as a frequent consultant a neighboring physician who had the reputation in all the country around of being an excellent nurse—which meant, I found from my experience with him, that he knew how to look after all the little things that make the difference between life and death. He proved it here. Every day when he came he would go over, with me and with the nurse, every little detail of the case with infinite care and pains, and would give the most minute and explicit directions to the nurse for the care of the patient from hour to hour. I think it was his care, more than my treatment, that saved the patient.

This reminds me that I know of no better way for a young doctor to become a good physician than to call to his aid, in difficult cases, the older men in his neighborhood who have gained a reputation for special skill and success in certain lines, and to study their

methods. Certainly, I learned in this way many of the most important and practical lessons of my life in the care of the sick. I can look back to this doctor and that one all through my earlier and later professional experience and count up the good things I have learned from each of them.

The Dictum of Osler

William Osler is perhaps the greatest medical teacher among English-speaking physi-

cians. Nevertheless, I believe that the acceptance of his dictum, that "pneumonia runs its course uninfluenced in any way by medicine; it can neither be aborted nor cut short by any known means at our command," is fatal to all progress or great success in its treatment. Over the door of every school of medicine which teaches this dictum, should be written in letters of blood,

"All hope abandon, ye who enter here."

(To be concluded next month)

Pneumonia: With Special Pointers on Treatment

By J. H. BRISTOW, M. D., Portland, Oregon

IN ORDER that we may be of immediate and practical value to our patients, it is necessary that we have in mind, subject to immediate call, a vast fund of knowledge concerning the elementary parts of the science of medicine. Personally, I find that my most difficult efforts consist in keeping informed concerning the little matters that deal with the everyday problems that arise. Believing that we sometimes lose sight of the little (great) and essential values in our more abstract reasonings, it is my desire, in considering pneumonia, to present only some of its more elementary aspects. I shall recite briefly some of the symptoms and a little of the pathology, and shall undertake to show valid reasons for the use of calomel, aconitine, gelseminine, and digitalin in the treatment.

In nearly all descriptions of the onset of pneumonia, especially the lobar form, it is said that the disease begins with a chill of very great intensity. This symptom is, indeed, met with in certain parts of the country; however, in certain other localities pneumonia begins gradually, with no chill, but, with a growing prostration and with increasing symptoms of involvement of the lungs. In certain localities, the onset is stormy, sudden, violent; in others, taking several days to develop, it is like the fire that smolders for hours before bursting into raging flame. It is important to note these facts; for, they bear upon certain points of the treatment. In all the Pacific Coast region, the onset rarely is stormy; instead, it is a matter of several days, at first only a small spot being affected, this spreading with greater or less rapidity, until the entire lung-tissue is involved.

The rise of temperature corresponds, usually, with the manner of the onset; it being sudden and violent on the one hand, and, on the other, advancing more or less slowly.

From the first, especially in lobar pneumonia, there is likely to be pain in the side, owing to involvement of the neighboring pleura. The location of the pain is no particular indicator as to the location of the lung trouble, inasmuch as the pain is likely to be felt at a special point, regardless of the part of lung diseased; that is, at the anterior axillary line, at about the sixth or seventh rib. Even in apical pneumonias, the pain may be felt at this point. It is made worse by cough as well as by respiratory movements.

In basic pneumonia in which there is involvement of the pleura of that region, it is important to remember that pain in the abdomen may be violent and may simulate certain abdominal diseases. We are all aware of the fact that indifferently examined patients have been operated upon for appendicitis because of pain and tenderness in that region and very long (or short) appendixes have been removed, only to have a (supposed) postoperative pneumonia promptly develop. The appendix being now absent, we have time to make a complete examination—and, therefore, a complete diagnosis.

Some Special Symptomatology

Headache quite infrequently is a troublesome symptom, while also the bones feel painful, as in grip.

Fever always accompanies the acute forms of pneumonia, and its degree of severity is a

fairly good indicator of some of the things that are going on. In apical involvement, the temperature will be very high, even though the involvement be small. In children, when the attack is ushered in with a very high fever, and possibly accompanied by spasm, one hardly will miss a guess that the apex is affected. This location accounts for the violent delirium in many instances.

While cough is a constant symptom in pneumonia, it is well to remember that the aged, children, drunkards, and those debilitated by other exhausting diseases may not cough. Cough is a variable symptom, easily induced by other conditions—as in whooping-cough, chronic bronchitis, asthma, and so forth.

In the early part of the attack, the pulse is rapid and full; later, it may be even more rapid, but loses its fullness. The pulse gives us a fairly good hint of what is going on in the circulatory apparatus; for, the blood pressure, during the early part of the disease, is prone to be somewhat raised, although it soon shows a decline below the normal. A fall in tension that is sudden and to a point at or below 100 mm. of mercury, indicates that collapse and death are imminent; a gradual fall to a point below 100 mm. is a matter of sinister portent. There is no doubt but that, whenever possible, the sphygmomanometer should be at hand, and that the nurse should understand its use. This instrument, of such great value to us in certain other diseases, should have its prime usefulness in pneumonia fully recognized. Whenever possible, a constant record of its readings during an attack should be kept. It will indicate the course the disease is running and point the way in certain vastly important matters in the treatment.

The tongue, in pneumonia, is coated; constipation is apt to be marked; the breath is more or less offensive; the urine is scanty and high-colored. "The urine contains indican in many cases," says a famous textbook. Personally, I am of the opinion that the author of that book missed his chance when he failed to enlighten us more fully regarding the significance of indican in the urine during an attack of pneumonia. The total acidity is apt to be high; a trace of albumin may be found; also, perhaps, a few casts. In short, the urine indicates with fidelity the fact that plenty of poisonous fermentation toxins are being formed within the bowel; which toxins surely are going to be decidedly detrimental to the patient as long as the fermenting contents are allowed to remain. I do not ignore

the fact that poisonous toxins are being formed elsewhere also; but, then, they can not possibly be handled as long as the load of refuse keeps coming along from the bowel.

It is customary for a man to take off his coat before he fights; ships are "stripped" for battle; even automobiles are relieved of all useless impedimenta before a race is run. Old, rotten feces within the bowel, toxins, fermentation products, indicanuria, high total urinary acidity, foul tongue, bad breath, fever and pain are, surely, serious impediments for one who must battle with that grim enemy, pneumonia.

A Hypothetical Case as an Illustration

Let us suppose that we are dealing with a typical attack of lobar pneumonia. There is chill, pain, cough, fever, rapid pulse, initial rise of blood pressure, with its subsequent fall, quickened respiration, and so on. On the Pacific Coast, we likely shall not encounter the initial chill, but, rather, a slow beginning, with a diagnosis deferred until the second or third day. In place of the stormy onset, with the patient flushed and suddenly very sick, we have a gradual appearance of these factors; the blood-pressure phenomena appearing more slowly—that is, extending over a greater length of time.

Remembering the efficacy of bacterins, fresh air, good nursing, feeding, besides many other essential measures, our thoughts turn to those drugs that are to meet the main difficulties besetting the patient. Even though we possessed a specific, we should find use for other drugs of a certain kind. In diphtheria, for example, even though we know that antitoxin will cure in nearly every case, we do not sit idly by, leaving the positive drug indications unfilled.

In lobar pneumonia, there is, first of all, severe congestion of a given area of lung-tissue. It is quite to be inferred, and the symptoms point to the fact that there is more or less congestion of all the lung-tissue. Indeed, the latter condition may proceed to such a point as to cause almost immediate death. At first, there is a diminished amount of blood at the body-surface, which may account for the chill. Increased tension occurring during the early part of the attack will, naturally, produce congestion in the head, but a diminished amount of blood within the abdomen; except the known susceptibility of certain abdominal organs to congestion during high tension (accounting for kidney involvement). Later in the course of the attack, the picture changes very materially.

I wish to make a point of this matter. It is wrong to assume that one falls ill of pneumonia, and has it right through, and gets well or dies, according to the severity of the attack.

An examination of events as they pass will reveal the fact that pneumonia has its three stages as clearly as one could wish. I do not refer to the three stages of pathology at all; for, while symptomatic conditions may possibly follow the pathology somewhat closely at times, the fact remains that symptoms exhibit certain vital changes quite irrespective of the stages of pathology.

Now as to the matter of circulatory tension. At first tension will be raised for a short time—during one, two or three days. Later, it is lowered, possibly to the danger-point. This occurs without reference to first and second pathological stages. Why is this? Because at first the heart is able to do the work demanded of it and to keep up the increased pressure; later, its weakening muscle simply can not hold the pace. This fact accounts for the majority of deaths occurring from this disease.

To be sure, diminished tension during the later and during dangerous stages of the attack has an additional cause in a relaxation of the peripheral vessels, owing to the action of toxins, and, doubtless, to other causes as well, such as general exhaustion. At this time, examination of the surface will show that the flushed skin of the early part of the attack has given way to paleness and clamminess; and general conditions will announce the severe difficulties under which the vital powers are laboring.

About the Treatment

In treating one who is sick, anything that will have a tendency to restore normal conditions will have the effect of curing or mitigating or shortening the attack. I quote the aforesaid textbook again: "No specific having been found, there is [in substance] nothing to do." And that pronouncement, let me say, has caused me to quit reading that book. It's all bad enough without such foolishness. I have set forth sufficient facts concerning the urine in pneumonia to warrant treatment, even though there were no further indications.

The component elements of calomel liberated within the digestive tract act upon the secreting cells of the liver. This drug also has the property of softening and expelling the contents of the bowel. It has a certain degree of antiseptic power within the bowel. Its action upon the kidneys is of a favorable

nature. So well known is the beneficial action of this drug that I shall be content to say that, were the tongue not furred nor the urine showing any abnormality, also the bowels freely open and the patient devoid of headache and other main signs of toxemia, then the dose of calomel might be omitted.

It will not hurt to reiterate that this dose of calomel should be not too large, that the powder must be finely subdivided, and that it should be followed by a laxative saline. Also, that in hot weather the dose should be larger for a given individual than in cold weather; this for the reason that the liver is apt to respond but sluggishly during hot weather.

For many years the medical profession has been using aconite in the treatment of pneumonia. There is no doubt but that harm has been done at times by the indiscriminate and illogical application of this drug. Nevertheless, there are reasons why aconite has done much good for those ill with pneumonia, and more especially after the undependable tinctures were replaced by the active principle of the root.

Aconitine in moderate medicinal doses exerts no appreciable effect upon any part of the economy save the circulatory apparatus. It slows the excited circulation by its stimulating effect upon the vagus center, while by direct action it quiets the excited heart-muscle. Arterial tension is reduced chiefly because of the sedative action upon the heart. The same dosage will exert a sedative effect upon the respiratory movements, and, it would seem, the more hurried the respiration, the more pronounced the effect. Aconitine dilates the surface capillaries, thereby reducing fever, through increased radiation. It increases the urinary flow. And, for the benefit of those who inveigh against giving anything that will "depress" the heart, I will say that aconitine, even in large doses, is eliminated from the economy in about three hours.

Sthenic Pneumonia, and Aconitine

Now, if I have induced you to read thus far, suppose you stop for a moment and meditate upon a sthenic pneumonia or any pneumonia attended by an initial increase of blood pressure.

It is argued that in pneumonia one should never, in any case, give that which has a depressing effect upon the heart-muscle, for the reason that later on the heart will need all its strength. They are in a class with those who believe morphine to be a heart depressant.

Let us suppose that it were one's leg-muscles and that he is going to climb a mountain.

Were one to see him running for ten miles before he begun the climb, one probably would counsel him to conserve his strength by walking, or even crawling, or, if possible, accept artificial aid and ride in some vehicle. And I'll wager there are people who would say he could never make it, for while he was riding his leg-muscles would "all shrink up." Aconitine is eliminated in three hours. Properly given, this alkaloid will greatly mitigate the labor of the preliminary run before the real climb has begun.

With due understanding of circulatory conditions, there is every reason why aconitine should be a tower of strength in bringing the patient to the second, and most serious, stage of the battle. At this time I am not permitted to discuss its value in later stages of the disease.

I have intimated that pneumonia presents a different aspect in the Pacific Coast region. It does. So different, indeed, is its appearance here that we depend, not so much upon aconitine, as we do upon gelseminine for quieting the fever and excitement. Here, pneumonia appears slowly. The disease "blooms out" during several days, rather than in but a few hours. The patient suffers distress and wakeful nights, cough, and growing anxiety. Blood pressure may be elevated but little, if any; usually being lowered from the start. Without entering further into that matter, I will say that we find gelseminine of very great value. Our homeopathic friends understand full well the value of this measure, and they find this drug extremely useful.

In speaking of three symptomatic stages in pneumonia, I have in mind a first stage—when the blood pressure is raised; a second, when it is lowered; and a third, when it returns to normal.

The Role of Digitalis

The time soon arrives when the blood pressure begins to fall, the pulse quickens, temperature falls a little, and general conditions assert the gravity of the process going on. Blood pressure falls mainly because of weakening of the heart-muscle, benumbing of the nerve-centers by toxins, and dilatation of the peripheral vessels from the same cause.

In order for the blood to circulate properly, all of it must go freely through the pulmonary vessels, and all of it must go freely through the general circulation—including the portal system. The obvious difficulty of forcing it through the choked-up lung explains a vast amount of the causes of circulatory troubles. One obstruction is just as bad as the other.

We might here reflect upon the effect of a dose of calomel upon the portal system.

It is my opinion that, if one can but support the heart until the fires of disease burn down, he will have done the chief thing toward bringing about a favorable termination. Any drug that has a tendency to enable the heart to overcome the obstacles set in its way should be given until its positive effect is shown.

Dosage is the "foolest" thing we do. Along comes a book, and it says you may give just so many, or about so many, drops of digitalis to a grown-up person. Foolish direction! Remembering the known difficulty of securing potent preparations of digitalis, one should select the active principle, and give it in just one dose; which is, until its effect is shown. In pneumonia, it should be begun at near the maximum dose (given by mouth or hypodermatically, according to circumstances), and be promptly increased when no effect is shown.

In view of the ideas set forth, digitalis seems ideal for meeting certain conditions. It has no effect upon the nervous system. It increases arterial pressure, slows the pulse and increases its wave; it stimulates the heart-muscle and prolongs the diastole, which is the period of rest. Increase of blood pressure is assisted by its action upon the vasomotor center and walls of the vessels, while the increase of the pulse-wave is due to complete contraction of the heart.

In medicinal doses, digitalis has no deleterious effect upon the body. It does not let the patient down when it is discontinued, for, a permanent "tonic" effect will result when it is given for any length of time.

Digitalis should be given during the second stage of pneumonia. I have said at another time, and I repeat now, that it is a therapeutic crime to wait until the patient shows marked need for the drug before it is begun. One should see ahead, by pulse rate, temperature, sphygmomanometer readings, uranalysis, and so on, that the time is coming when this drug will be needed, and meet that time by having its effect somewhat manifest when the necessity does appear. This will advance the beginning of defervescence; and even those who pin their faith upon the bacterins should remember that all will be better if the blood is sent around in a way resembling as nearly as possible the normal.

Digitalis (or its glucosidal representative,) is a drug of great value, easy to use, practically free from harmful possibilities, and leaves no bad after-effects.

In conclusion:

Rid the system of toxins, by the employment of calomel and its adjuvants.

In sthenic cases, give aconitine to effect.

On the Pacific Coast, gelseminine will be found of value oftener than aconitine.

Digitalin or digipoten should be used according to pulse and blood pressure indications.

No one should overlook the incomparable value of small doses of morphine for the relief of cough and pain, nor, also, the necessity of

careful feeding and the value of pure, fresh air.

It is not here intimated that one should use no more than four remedies in the treatment of pneumonia; rather, one should find a reason for every remedy prescribed. And, gentlemen and brothers, if we always felt perfectly well grounded in all we do in the treatment of the sick, there would be less cause for the editor of this journal to write editorials intended to wake us up to the duties of our high calling.

Diagnosis*

By ARTHUR M. CORWIN, A. M., M. D., Chicago, Illinois

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OF PROPHYLAXIS, diagnosis, and treatment, the greatest, perhaps, is the first; but the proverb says the first shall be last, or words to that effect, and, verily, we have but lately entered upon a domain where conservation and systematic prevention may save the race and add to its comfort and efficiency.

But, great as is prophylaxis and great as is the need of treatment of disorders that have not been prevented, to know what is the matter now, diagnosis, is the key to relief. Long live diagnosis—most important in the curriculum, whether of medical school or university of life. The slogan is: "Find what is the matter and then go after it."

When we enter upon the practice of medicine, we exemplify the work of both detective and court: as diagnostician we identify and catch the criminal; as therapist we fine or hang him according to his merits. Let us beware lest we hang, when good advice or a fine is all that justice demands; and, on the contrary, what an injustice to write a prescription where only prompt use of the knife can save. As the court may not inflict punishment upon the thief uncaught, neither can the doctor treat a disease which he has not found. Sherlock Holmes is a synonym for that fundamental trinity—keen observation, correct reasoning, wide experience—upon which clinical medicine is built. Without them, the doctor is a mere pedler of pills, dickering with symptoms while the causative disease gets away with his patient. The animated pharmacopeia, and the ignorant, thirsty scalpel, symbolic of low grade doctors, are equally dangerous, unless therapeutical learn-

ing and surgical enthusiasm are coupled with clinical acumen and fortified by conscience. To quiet pain with morphine while the appendix continues to infect the peritoneum, to dilate a sphincter for the cure of asthma when nasal polypi are the cause, is bad business and worse practice.

Diagnosis deals with facts that stand, while the hypotheses of empirical therapy pass. Diagnosis—the art of finding out what is the matter and where—is the room in which the doctor lives. Upon the one side opens the window of causation, upon another that of prognosis, and upon a third opens the door of treatment. Symptoms are mere straws which show which way blows the clinical wind of disease; empirical medicine takes the straws for the wind itself; hence, its dictum—for every symptom a drug. To know thoroughly the condition of the patient is our primary aim; to label the condition back of the symptom complex is incidental.

A Symbol of Diagnosis

The human hand in the act of seizing is a fine emblem of general diagnosis, which, to know thoroughly, seeks to grasp the entire field of clinical facts. There are five definite groups of data, the facts in each group so related that the generic idea covering them may be assigned to each digit according to its efficiency. We say *human* hand, for, be it remembered, the thumb of the monkey is rudimentary. Although its fingers are active, no simian's hand grasps, and it would be better if it had a strong, well-proportioned thumb. In the hand of man, on the contrary, the thumb is the dominant digit, and it is equally vital from our symbolic point of view.

*Addressed to students, College of Physicians and Surgeons, Medical Department, University of Illinois, and reprinted from *The New York Medical Journal*.

The facts of family history are least important in determining a patient's lesion and, therefore, are naturally assigned to the little finger. But, cut off this finger, and how handicapped is the grip. So, hereditary tendencies are often of considerable significance in sizing up difficult cases, where every bit of light is needed.

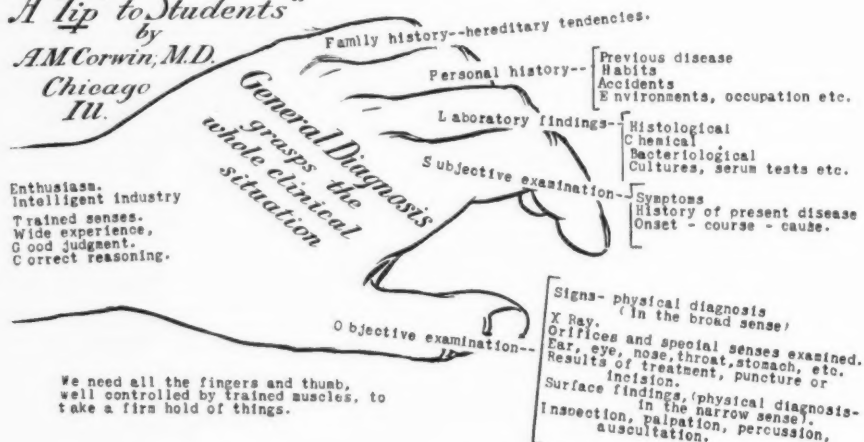
The data of personal history, of next importance logically, fall to the lot of the third finger; their value in diagnosis is obvious. The middle digit, strong and prominent, may be safely dignified with the contributions of the laboratory, extremely valuable in the diagnostic work of up to date, modern medicine. The microscope, test tube, and culture

hands of the skilful physician, who, by the aid of his own trained senses, is able to make out a case. In other words, if all means of diagnosis were to be denied us save one, we should naturally reserve objective examination as the most essential.

We have chosen the symbol of the hand because it illustrates so perfectly the five groups of data with which the examiner must deal if he would find out what is the matter with his patient, and, as the hand is useless without active muscles and tendons, so are these avenues of information worthless unless behind them are enthusiasm and active interest in the work in hand. Without these, no man may accomplish his full share of

A "Tip" to Students

by
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medium, once strangers to scalpel and prescription, are today their boon companions. The laboratory opens directly out of the sickroom. But, as the index finger most easily cooperates with the thumb in picking up a thing, so are the sensations of the patient leading pointers to his trouble. They are, therefore, the property of the first digit. It is the sufferer's symptoms that are wont to focus our attention upon the seat of his disease, but distant complications or incidental lesions must be discovered, perhaps through other channels.

Most powerful of all the five is the thumb itself, as has been said, and upon it falls the chief responsibility. Amputate all the fingers, and the thumb, still opposed to the palm, makes a very respectable prehensile showing. The patient, deaf, dumb, and unconscious, without friends, may fall into the

usefulness. Industry, too, is essential, but haphazard activity may be largely misdirected. It is intelligent, wisely directed effort that counts. The senses must be educated; the eye to see, the ear to hear, the hand to feel. It is astonishing what the blind man can do by concentrating his attention upon the senses of touch and hearing. The same power lies latent in each of our senses, waiting to be aroused by use.

It goes without saying that wide experience alone can give the facts necessary for safe deductions. With all these qualifications, the physician may be encyclopedic in his knowledge, but extremely impractical and unsuccessful in his profession without common sense and correct habits of reasoning. A word to the wise is sufficient.

When the air of civilized centers shall be purged of smoke, dirt, and noxious gases, our

houses properly ventilated, and a vacuum cleaner installed where dust rag and broom now hold sway; when our drinking water shall be filtered, our milk certified or sterilized, our food protected from the selfishness of adulteration; when the mosquito has been drowned in Standard oil, and the tick, louse, bed bug, and flea—those carriers of preventable diseases—are banished, or at least rendered harmless, and the last house fly has been everlastingly “swatted”; when temperance shall sit at every board, not as a guest, but as a member of the family; when worry is cast out of the window; when habits shall be drugless; when one standard of morality shall be recognized and enforced for both sexes alike; when honor and purity shall reign in society; when marriage shall be based upon mental and physical fitness, comradeship, and mutual love; when religion

shall be the expression of universal brotherhood under one God; when warring dogmas shall cease to growl from the pulpit and snarl from the pews, and bitter, narrow sectarianism shall be buried in the potter's field without flowers, crape, or marble to mark the lonely spot; when labor and capital shall clasp hands in fraternity; when graft is divorced from public office; when good citizens unite in politics; when big business has grown a conscience and truth-telling becomes popular; when women are given the franchise; when some hundred other desirable things shall be realized through the effort of prophylaxis and conservation, then, in that millennial day, rescued from innumerable preventable diseases and distresses of mind, body, and body politic, mankind may concentrate attention upon what is left to find out and correct, if there is anything.

A Study of Atropine

By H. HAMILTON REDFIELD, B. S., A. B., M. D., Chicago, Illinois

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THE presence of atropine in *atropa belladonna* was first made known by Mein in the year 1831, but it was not until three years later—1833—that it was isolated by Geiger and Hesse.

Medical history teems with descriptions, both botanical and pharmaceutical, of the mother-plant, belladonna. Matthiolus, he of ancient times, alludes to it under the title bestowed by the Venetians, who called it *herba belladonnæ*; a name chosen because the ladies of the Venetian court made use of a distillate of the plant as a cosmetic—*Bella donna* meaning, beautiful lady.

Sometime about 1504 a book, entitled the “Grand Herbar,” appeared in Paris, in which is found the first authentic account about the belladonna herb as used medicinally, although there is strong evidence with which to support a hypothesis that the term *solutrum* minus used by Saladinus in 1450 refers to this drug-plant. In 1760, Amoreaux, of Paris, gave a very concise description of its effects when taken internally. Subsequently (1776) Daries, of Leipzig, and Muench of Göttingen, in 1783 and in 1785, wrote very comprehensive treatises on its uses and effects in medicine. In 1542 the German botanist Leonard Fuchs wrote (with accompanying drawing) on the toxicology of the

plant, under the name of *Solanum somniferum*, giving a full and complete identification of its poisonous properties. Also, in 1677, J. M. Faber, of Augsburg, wrote on its poisonous action.

The first authentic study of the mydriatic action of belladonna is found in a work by Himlay, of Paris, in 1802. Among the homeopathic writers, belladonna has, from the first, been accorded great prominence, ranking as one of their leading remedies. In the early American works of the regular school, we find it commended in the *Pharmacopeia* of the Massachusetts Medical Society in 1808, in Thatcher's *Dispensatory* in 1821, and in the *Eclectic Dispensatory* issued in Philadelphia in 1827.

From a physiological standpoint, the most complete treatise, in all probability, ever penned is the one by Dr. John Harley (co-editor of *St. Thomas Hospital Reports*, 1874-76, London), in a work entitled “Old Vegetable Neurotics” (1869).

Physical Properties of Atropine

Pure atropine occurs in the form of colorless or white, glossy, acicular crystals, is odorless and of a bitter and acrid taste. It has a melting point of 113.5° C. (236.3° F.), according to Ladenburg (1880); of 115.5° C.

(240° F.), according to E. Schmidt (1881). When carefully heated, it volatilizes at 140° C. (284° F.), partly unchanged; but when raised to a higher heat it is completely decomposed, leaving no residue. According to von Planta, atropine is soluble in 300 parts of water, while Geiger claims for it a solubility of 1 part in 500 parts of water, and the U. S. Pharmacopeia gives its solubility as 1 part in 500 parts of water at 15° C. (59° F.), or as 1 : 30 in continuously boiling water (Geiger and Hesse). It is freely soluble in alcohol, and dissolves in warm oil of turpentine. Geiger and Hesse state that it is soluble in 63 parts of ether, while Brandes places the ether solubility at 1 : 36.

Atropine is strongly alkaline in reaction, and neutralizes acids, forming crystallizable salts. Solutions of the salts of atropine are not precipitated by platinic chloride, except when in a very concentrated state.

The almost complete insolubility of atropine makes its use in the pure form prohibitive, and it is therefore generally employed in the form of the soluble sulphate.

Physiological Action

The injection of 1-20 grain of atropine causes, in about twenty minutes, an increase in the pulse rate, from 72, to 110; the mucous membranes of the mouth, throat, and nose become dry, and mydriasis occurs. The sight becomes indistinct, vision blurred, grotesque hallucinations occur, and in some instances delirium; there is a sensation of giddiness and an inclination to sleep. In some cases, especially where there is a marked idiosyncrasy to the drug, there may be an erythematous eruption on the skin, closely simulating the rash of scarlet-fever; occasionally there is an erythematous and pseudo-erysipelatous swelling of the face and neck.

Children seem to bear atropine much better than do adults, and several remarkable recoveries from the toxic action of this alkaloid have been reported. An infant of nineteen months swallowed about 3-4 of a grain of atropine sulphate. In half an hour the cutaneous surface became bright-scarlet, tonic spasms occurred in the limbs, with dominant rigidity, and especially rigid flexion of the thumbs and great toes. As in other cases of poisoning, delirium, hallucinations, dizziness, drowsiness, and dilated pupils occurred. However, recovery took place in twenty-four hours.

Sometimes the pulse becomes very rapid, respiration hurried, and then, owing to an accumulation of mucus in the air-passages,

it becomes interrupted or suspended; there may be dysphagia, convulsions, retention of urine, and, after recovery, desquamation of the cuticle.

A weak, sickly child of six years recovered in twenty-four hours from a dose of 1-2 grain of atropine, and another of three years, after as large a dose.

The author once observed the case of a nurse in a Chicago hospital who took by mistake 3 drams of fluid extract of belladonna. Aside from a display of the drug's full physiological action, there were no untoward symptoms, and recovery occurred in thirty-six hours, the girl returning to her duties.

There have been cases reported in which 1 1-2 grains of atropine did not prove fatal (*Med. News*, Dec., 1881, p. 758). An adult recovered after a dose of 9-10 of a grain given hypodermically (*Med. News*, May, 1881, p. 307). Sink (*Jour. Am. Med. Asso.*) reports a case of extreme atropine poisoning from the instillation of the drug in ophthalmic work.

On the other hand, a case is noted in which an excessive amount was applied dermically (over a blistered surface), in which, in addition to the above mentioned symptoms, there were dyspnea, dysphagia, infection of the conjunctiva, and choreic movements of the limbs; the pulse grew thready, and death occurred in two hours.

Sometimes a marked degree of cutaneous anesthesia occurs, and to this may be attributed the inability of the person to direct the movements of the limbs or grasp an object.

A man was found dead after taking 2 grains of atropine, and another died as a result of the application of atropine-ointment to a denuded surface. The symptoms consisted of agitation, followed by coma, quick and thready pulse, muscular rigidity, interrupted respiration, convulsions, and coma.

Usually in atropine poisoning the post-mortem findings are significant. The skin is discolored, the lungs and right side of the heart are distended with blood, the left side less so or empty, the brain congested, and the blood usually uncoagulated.

Under atropine, there is a primary slowing of the heart, which soon becomes very rapid and vigorous, the pulse being doubled in rapidity; coincident with this, there is an increase of blood pressure.

This action of the alkaloid is produced by a stimulation of the cardiosympathetic apparatus and a paralyzing of the intracardiac inhibitory ganglia, thus producing a stimula-

tion of the accelerator apparatus, while lessening inhibition. Note here the difference between atropine and digitalin, which latter increases both phenomena. At first, there is general vasomotor stimulation, with increased blood pressure; but afterward, by overstimulation, an inhibition occurs, the vessels relax and blood pressure is greatly lowered. Complete motor paralysis follows, then delirium, stupor, and finally death from asphyxia.

Local Action of Atropine

The pupils are dilated by atropine, both if used locally or systemically; the drug stimulating the end-organs of the sympathetic nerves and paralyzing those of the motor-oculi muscles, thereby increasing the contractile power of the radiating fibers of the iris and decreasing the sphincter action of the circular fibers.

While the foregoing offers a very excellent physiological explanation of the mydriatic action of atropine, yet, it does not suffice when we contemplate mydriasis occurring after a local application in the eyes of cadavers. In a series of experiments conducted by the author in the summer of 1912, it was demonstrated that atropine caused dilation in the eyes of cadavers, in some instances as long as one week after death; and the mydriatic action of the drug was also manifest in fresh-killed bullock's eyes, as also in the eyes of sheep, removed from the carcass. There must, therefore, be some local action with which at present we are not acquainted.

Atropine also paralyzes accommodation and lessens intraocular pressure. Donders has shown that 1-700,000 grain of atropine will produce mydriasis.

Under atropine, the brain is congested, a busy delirium being produced, and hallucinations with mental disorders, due to a selective action on the cells of the gray matter.

The spinal cord is stimulated from the third cervical to the tenth dorsal vertebra, this resulting in paralysis of the motor nerves, both central and peripheral; power being lost in the lower extremities first.

There is a slight impairment of sensibility, but there is no change in the irritability of the muscles.

Respiration becomes rapid, and there is a rise of body-temperature.

A. Zeller has shown that the movement of the blood-corpuscles is checked when blood outside of the body is brought in contact with a 1-percent solution of atropine.

The alkaloid is absorbed with great rapidity from the intestinal tract, but only slowly

through the skin. It is eliminated in greater part or wholly unchanged. In fatal cases of poisoning, atropine has been recovered from all the tissues of the body, and S. Fabini and O. Bonanni have detected its presence in the milk. Its chief avenue of escape, however, is through the kidneys; hence, atropine poisoning may be easily diagnosed by simply dropping some of the urine of the patient into the eye of any domestic animal; then, if mydriasis is produced, atropine is the toxic agent involved.

Atropine exerts a depressant action on the nerve-ending in the secretory glands, thereby making impossible the passage of impulses to the gland, the gland becoming inactive and devoid of secretion, through the temporary cessation of physiological function. This action of atropine applies to nearly all the natural secretions, the exception being, the pancreatic juice, the urine, and the bile; these secretions not being influenced or controlled by a special secretory nerve, are not affected by atropine.

The total amount of gastric juice in the stomach is decreased by atropine, as well as the percentage of hydrochloric acid. In large doses, it decreases peristalsis, while in small doses it increases peristalsis. Combined with purgatives, it prevents griping, but the manner in which it accomplishes this is at present unknown.

Upon the central nervous system, atropine possesses a complex action. Large doses cause restlessness and excitement, then talkative delirium and, finally death, preceded by stupor and coma.

In all probability the first of these effects is due to cerebral stimulation, especially the motor area, and the latter one to cerebral depression—first of the controlling centers, and second of the psychic centers.

Therapeutics of Atropine

The chief uses of atropine are as follows:

- (1) To relax spasm.
- (2) As a check to excessive secretions.
- (3) As a vasomotor stimulant.
- (4) As a mydriatic.
- (5) To paralyze accommodation.
- (6) To allay peripheral irritation.
- (7) To stimulate peristalsis in the intestine.
- (8) To impress the cardiac nervous mechanism.
- (9) As an antagonist to certain poisons.

As a relaxant, atropine possesses little value in the treatment of general convulsions when of cerebral or spinal origin, but in cases of local spasms produced by peripheral irritation it is of great service. This quality constitutes it one of our best remedies in the

treatment of pertussis and laryngismus stridulus.

It is a valuable adjuvant to morphine in the various colics—renal, biliary, and intestinal—and should be given freely, to guard the morphine and relax the spasm.

It can be exhibited with good results in asthma, where in combination with glonoin it produces prompt relaxation.

The author has used it extensively in treatment of incontinence of urine in children, when it is due to vesical hyperesthesia and spasm of the sphincter. Here, it should be given until a sensation of dryness appears in the throat or the pupils dilate.

In torticollis, intramuscular injections of atropine have been advised, and numerous cases of prompt relief by this treatment have been reported.

In the form of suppositories, it is effective in cases of spasm of the anal sphincter, also in dysmenorrhea.

It is indicated in those who are of a bilious, lymphatic, and plethoric constitution; women and children with a delicate skin. When in good health, they are jovial and entertaining, but when in poor health they are delirious, violent, and threatened with convulsions. The face is red, conjunctivæ are congested, eyes staring, and pupils dilated. The carotids throb, and the pulse is free and bounding.

During the early stages of tabes dorsalis, it is sometimes plainly indicated. The carotids pulsate, pupils are dilated, there is ptosis of the eyelids, diplopia, urinary incontinence.

It is a sovereign remedy in congested headache when the face is flushed, head hot, eyelids ptotic, and there are flashes of light before the eyes, and a sensation of blindness.

It is one of the best remedies available with which to combat the night sweats of phthisis. Here, in doses of 1-250 grain, alone or in combination with agaricin, it will check the sweating and make the patient comfortable.

To check the flow of milk in nursing women who are weaning their babies, it stands first among therapeutic agents.

By stimulating capillary circulation, thus preventing the local effects of the acute congestion or inflammation in the congested organs, atropine is of great service in the treatment of tonsillitis, croup, bronchitis, pneumonia, and pleurisy.

In all pathologic conditions occurring in the chest that call for bryonin or asclepidin, atropine is useful, and may be combined with the other agents mentioned, to the enhancement of their value.

Given in pertussis together with calceidin, it shortens the paroxysms, renders respiration easier, and relieves capillary engorgement and the accompanying inflammation.

It admits of no substitute in the therapeutics of the fevers of malarial origin. Combined with aconitine at the onset of sthenic cases, it meets in an admirable manner many of the indications.

In the treatment of typhoid fever, the author considers it indispensable. Here it prevents any congestion of the intestinal mucosa and glands, which of itself is sufficient to entitle it to honorable mention. Under its effect, the heart is stimulated to send the blood thoroughly throughout the capillary system, thus preventing cerebral engorgement. The cerebral symptoms, so often seen in typhoid fever, exhibit many of the atropine indications, and under its influence are quickly dissipated.

While gelseminine is more frequently indicated in meningeal inflammations than is atropine, still, there are cases of a certain type in which the latter remedy is urgently called for. In the subacute cases of childhood, this is especially true. The skin is cold and moist, and there is a slowly increasing mental dulness. The temperature rises two or three degrees, the pupils are widely dilated, eyes are dull, head is drawn back and rolled from side to side, sometimes the child clasps its hands on the back of the neck, and upon pressure below the occiput pain is complained of. The patient sleeps with the eyes open, and there is involuntary urination.

While pilocarpine and ferric chloride are accorded the first honors in the treatment of erysipelas, yet, there are instances in which they seem of no avail, and many of these cases, if put on atropine and aconitine or on atropine in alternation with rhus toxicodendron, will show an immediate and most gratifying improvement. The author has found it most effective in those cases where the indications for rhus toxicodendron were prominent, that is, skin smooth, dark, and deep-red, sluggish circulation, burning pain.

Atropine in the Eruptive Fevers

The early use of atropine is imperative in the eruptive fevers. Under its influence, the rash comes out quickly, and when it is administered early, retrocession is almost impossible. Should retrocession have occurred, atropine will restore the eruption quicker than any known agent.

Even a brief study of its physiological action will convince anyone that atropine

should have a prominent place in the treatment of scarlet-fever. It aids in equalizing the circulation, stimulates the respiration, relaxes spasm, determines the eruption to the skin, hastens exfoliation, and opposes the renal hyperemia and nephritis so common a sequel of scarlet-fever. Even in the presence of a postscarlatinal nephritis few more prompt and reliable agents can be found. Here, it acts beautifully in combination with apocynin, and it can be alternated with santalin. In a case presenting with a partial suppression of the urine and an excess of urinary albumin, add 2 grains of gallic acid every two hours, and a cure is almost certain.

The pathology of nephritis is a direct appeal for atropine: albuminuria is caused by a great increase in the blood pressure in the renal vessel and engorgement of the capillaries. Atropine antagonizes all these changes in a manner that is prompt and direct, and in acute cases one or two doses are sufficient to convince the prescriber of its influence for good. It must, however, be given persistently in the subacute or chronic forms; when, if no structural changes have occurred, the results will be fully as satisfactory.

In the congestive type of dysmenorrhea, when it is combined with aconitine and gelseminine, atropine is exceedingly useful, the vast majority of cases presenting with a cold skin, cold extremities, dulness, chilliness, and inactivity; all of which symptoms are direct atropine guide-posts.

In rigid os uteri, an ointment containing atropine applied directly to the os, with caulophyllin internally, will often change the complexion of a case of delayed labor; much to the relief of mother and obstetrician.

By preventing adhesions between the iris and the capsule of the lens, and also by breaking up existing ones, it is indispensable in iritis. It also can be used with good results to allay the irritation in keratitis. In the latter condition, a solution of 1 or 2 grains to the ounce will be sufficient.

In recent cystitis, caused by chill, the alkaloid internally, with arbutin, and the ointment applied to the perineum, constitutes very efficient treatment.

An acute coryza can be broken up with a few small doses of atropine.

In the treatment of arterial cerebral congestion, atropine occupies a very prominent place. There may be hyperemia as a result of sunstroke (in which event it stands second to glonoin. the peer of all agents in

such conditions), or the congestion following reaction from concussion, or the result of mental excitement or intemperance.

Atropine is indicated in those who take cold easily and are especially sensitive to drafts of cold air; for instance, in men who take cold after having their hair cut. There is, generally, headache of a throbbing nature. The pains come on suddenly, remain only a short time, and leave as suddenly as they came, without any apparent cause whatever.

The face is red and swollen, eyes are congested and injected, pupils dilated and staring. The carotids pulsate and the pulse is full and bounding, with the mucous membranes of the throat, nose and mouth hot and dry.

Atropine in Nervous and Mental Troubles

Atropine should be studied in all motor disturbances, when there is a condition of anesthesia or when, owing to the great irritability of all the senses, there is present marked hyperesthesia. The muscles jerk or twitch, conditions often met with in puerperal convulsions, the spasms of infancy, epilepsy, hydrophobia, chorea, whooping-cough, and locomotor ataxia.

Atropine occupies an honorable place in those mental disorders characterized by marked alterations in the moral tone of the individual—hallucinations, melancholia, and rage, with illusions of a spectral nature.

In the congestive delirium which frequently attends the acute fevers or which is a result of metastasis to the brain, atropine is the remedy of choice.

Congestive vertigo is relieved by atropine. It also relieves congestive, neuralgic or nervous headaches when the face is flushed, eyes are injected, the lids show ptosis, head feels as though it were on fire, or the patient may complain of a sensation of blindness, or, again, there may be flashes of light which dart back and forth across the eyes. Here, the headache is made worse by light, noise, moving or on lying down.

The place of atropine in the treatment of arterial congestions of the brain has been firmly fixed.

In the hyperemia of sunstroke, it has but one peer, and that is glonoin.

The congestions met with in cases of injury to the head, when there are present all the evidences of concussion, congestions brought on by great mental excitement or excessive indulgence in alcoholic beverages are promptly met by atropine.

It should be studied in neuralgia of recent origin or when occurring in young patients, especially when associated with hyperemia and hyperesthesia. The pains are generally most pronounced about 5 o'clock in the afternoon, coming and going quickly, and are made worse by motion. In these cases, it will be found, as a general rule, that the trigeminus is the nerve most affected.

In iritis and other conditions of the eye, it gives excellent results.

The dryness, soreness, painful deglutition, swelling, and burning sensation seen in pharyngitis and chronic tonsillitis are indications that call for atropine.

In all congestions and inflammations of the uterus, when the patient complains of a violent burning sensation, with nettlelike pains and a feeling of fulness as though the womb were pressing down toward the vulva, atropine should be studied.

Atropine in Fevers

Its position in the treatment of fevers is between aconitine and arsenic. The type of fever is usually continuous. In these cases, the face is red and congested, eyes are bright and glistening, and the other general indications for the administration of atropine are present. In puerperal fever, resort to atropine is imperative; also at the onset of

scarlet-fever or measles when the skin is hot and glistening. In the Sydenham type of scarlatina, atropine is said to have a modifying influence on the course of the disease.

It has been used with good effect in peritonitis, when the transverse colon can be felt like a pad. There is soreness in the entire abdominal region and the tenderness is so great that even the jar of a person walking across the room disturbs the patient.

A dry cough, and the sensation of a feather in the larynx, worse at night, calls for atropine, although cicutine should be remembered in these cases.

In pleuropneumonia, after bryonin has completed its task and there remains an extreme and disagreeable soreness in the side, atropine will be found effective.

In mastitis, when the gland is hot and red, hard and heavy, the face flushed, eyes injected, pulse full and bounding, head throbbing, and there is an intolerance to light, atropine is of greatest service.

Specific atropine indication: congestion, especially of the cerebrospinal centers. Particular indications are: dull eyes, dilated pupils, somnolence and coma, night sweats of phthisis, convulsions, pertussis, epilepsy, neuralgia, chorea, hemorrhage. Differentiate from gelseminine, which has quite another field of action.

Refraction For the General Practitioner

By THOMAS G. ATKINSON, M. D., L. R. C. P. (Lond.), Chicago, Illinois

Author of "Essentials of Refraction"

EDITORIAL NOTE.—Are you following this series of papers upon refraction? If not, then you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and opens up a splendid field for good men. Look up the back numbers in Doctor Atkinson's serial. Buy a copy of his book. Write him for details, if you do not understand him fully.

Muscular Imbalance

WE HAVE seen, in one of our former discussions (see April issue) that, while accommodation and convergence are in reality two separate and distinct functions, so that one may be paralyzed without impairing the other, yet, they are normally interdependent. One stimulates the other, and they increase and decrease in mutual ratio. Indeed, as we also saw, the systems of measurement applied to accommodation and convergence, respectively, have been devised to express this constant ratio; the degree of convergence normal to the exercise of 1 D. of accommodation being expressed as 1 deg. of metric angle, for 2 D. a 2-deg.

angle, for 0.50-D. a 0.50-deg. angle, and so on.

This correspondence obtains only when the refraction of the eye, and therefore its accommodation, is normal. A disturbance of refraction upsets the ratio; while the degree of convergence necessary for single vision at a given distance is absolutely constant, and never varies, the amount of accommodation required for that distance varies with the degree of hyperopia or myopia present. To see, clearly and singly, an object at 1 meter distance, for example, requires 1 metric angle of convergence, irrespective of the refraction of the eyes, being simply a geometric question of visual

axes. With normal refraction, the same distance demands 1 D. of accommodation. But, if the person be 1 D. hyperopic, he is already using 1 D. of his accommodation for distant vision, and must therefore exercise 1 D. plus 1 D., or 2 D., of accommodation for 1 meter distance. On the other hand, if he be 1 D. myopic he needs no accommodation at all for an object at 1 meter distance.

Now mark the result of this discrepancy between accommodation and convergence.

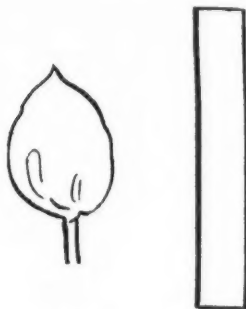


Fig. 1. The dissimilar images seen through the Maddox rod.

Normally, as between the two functions, accommodation is the stimulator, because it is the involuntary, or at least the subconscious, act.

When, therefore, a hyperope of 1 D. looks at an object 1 meter away, he puts into force 2 D. of accommodation. His immediate, natural impulse is, to make 2 metric angles of convergence to correspond with his accommodation; but this he may not do and have a single image. He may only make 1 degree of convergence. Hence, he is obliged to "hold back," so to speak, his convergence in an unnatural way, very much after the fashion of a man who tries to make a smashing blow with his fist and at the same time hit very lightly.

The myope of 1 D., on the contrary, looking at an object 1 meter distant, uses no accommodation, and his natural inclination, of course, is, to use no convergence. But, in order to have single vision at that distance, he, like the emmetrope and the hyperope, must make 1 metric angle of convergence. He, therefore, has to force his convergence in an unnatural way.

To be sure, hyperopic and myopic patients get accustomed to the discrepancy, so that eventually the unnatural exercise of accommodation and convergence becomes, to all intents, a natural one. Indeed, as we shall

presently see, when we correct these patients' errors of refraction and restore the proper ratio between accommodation and convergence, if their errors are of any magnitude, they are usually bothered a good deal to get accustomed to the normal relationship. It must not be supposed, however, that this class of patients get accustomed to the discrepancy by dint of *canceling* it. They simply learn habitually to *compensate* for it; which is quite another matter. Canceling the discrepancy would exempt the accommodative mechanism from extraordinary stress; compensation involves continual stress.

As to the Mechanism Involved

Let us look a little more closely into the mechanism of the matter. Convergence, as we know, is performed by the extrinsic muscles of the eyeball; we may say, for practical purposes, by the internal and external recti, the other muscles playing merely an accessory role to these cardinal pairs. Positive convergence is performed by means of the internal recti; negative convergence, by the external. Each of these pairs of muscles has its limit of functional capacity, as we have seen—the former 20 to 30 deg. prismatic angle, the latter 6 to 8 deg.

When the hyperope of 1 D. fixes his vision upon an object at 1 meter distance, he uses,

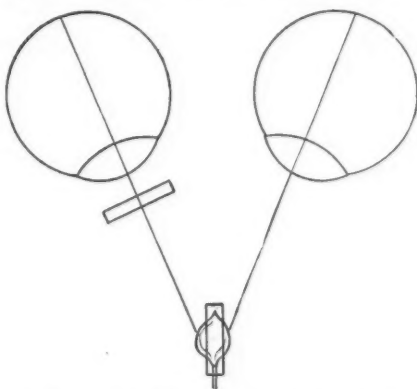


Fig. 2. Fusion of the images as seen by the normal eye through the Maddox rod.

as we have seen, 2 D. of accommodation, and is thereby stimulated to make 2 degrees of convergence, whereas he must make only 1 degree. Now, if he could, by a subconscious effort of the mind (which would quickly become automatic), simply refrain from making the extra 1 D. of convergence to which he is stimulated, the discrepancy

would impose no strain upon his muscles; that would be canceling the discrepancy.

Unfortunately, that is what the hyperope can not and does not do. When he uses 2 D. of accommodation, the stimulus to the convergence invariably, and unavoidably, works itself out; 2 D. of innervation is sent into the internal recti; 2 D. of contraction takes place in those muscles; and the only remedy left to the visual mechanism is, to oppose 1 D. of it by means of the external recti.

This is what actually happens. This is not cancelation, but compensation, of the discrepancy between accommodation and convergence; and it is accomplished always at the expense of the opposing muscles. Thus, a hyperope, every time he accommodates, brings into extraordinary play both pairs of muscles, the internal recti overconverging, the external recti opposing and correcting the overconvergence.

With the myope, the situation is somewhat different. At a distance of 1 meter or further, the myope uses no accommodation, and, as accommodation is the stimulating function, he feels no desire to converge. Whatever convergence he makes at this distance is done deliberately, soon becoming automatic; so that at 1 meter or further the myope does actually cancel the discrepancy, and suffers no strain upon his internal recti such as the hyperope suffers upon his external muscles.

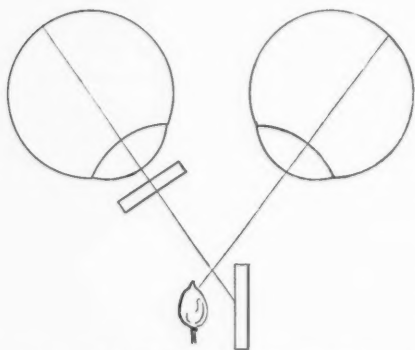


Fig. 3. The dissociated images seen in divergent imbalance with Maddox rod.

For this reason, myopes suffer far less discomfort and muscular trouble than hyperopes. Within 1 meter, the myope still accommodates less than normal, and the stimulation to convergence always is less than normal, calling for a deliberate effort

of the internal muscles to make up the deficiency. Thus, in myopia, there is no undue strain upon the outer muscles, but only a slight extra demand upon the inner; so that, all around, the myope is better off in this respect than the hyperope. Only

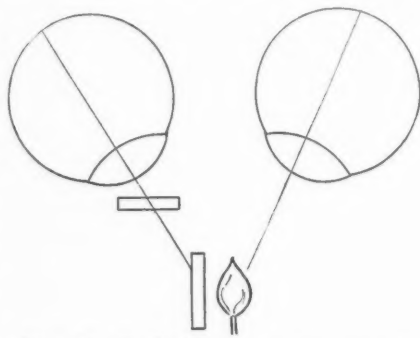


Fig. 4. The dissociated images seen in convergent imbalance with Maddox rod.

in severe cases, and under hard usage, does the myope succumb to the strain.

Muscular Imbalance Developing into Strabismus

Returning to the case of the hyperope, and carefully considering the conditions which I there described, it will be at once apparent (I need spend no time elaborating this to the medical man) that the tendency is all the time toward spasticity on the part of the inner muscles and toward exhaustion on the part of the outer ones. As long as the two optics manage, between them, to maintain single vision, this state of affairs is designated muscular imbalance, and is made manifest only by certain tests—of which more later. But, in many patients, the time comes when the exhaustion of the external muscles can no longer hold out against the spasticity of the internal ones; the outer muscles give up the struggle; and internal strabismus results. While the struggle lasts between the unequally balanced muscles there is generally headache and other nervous troubles, owing to the unequal innervation of the opposing sides; but when the conflict is abandoned and the external muscles surrender, these nervous disturbances usually disappear.

In myopia (again I refer the reader to my description of the conditions), the internal muscles are inclined to exhaustion, while the external remain virtually normal. Hence, when imbalance breaks down into strabismus,

it is the internal recti which succumb, and the squint is external. However, for reasons already given, squint resulting from myopia is much rarer than squint due to hyperopia; and it is not so marked when it does occur, because there is no spasticity in the surviving muscles, as there is in hyperopia.

The Maddox Test for Muscular Imbalance

There are several methods of detecting and measuring muscular imbalance. The

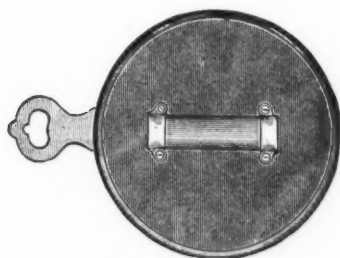


Fig. 5. Maddox rod

one in commonest use, however, is what is known as the Maddox rod-test. The Maddox rod is a narrow cylindrical rod of glass, set into an opaque disc, which has the effect of drawing out the light into a similar rod at right angles to the axis of the glass cylinder. (See "Cylindrical Lenses" in the March number.)

The Maddox test is based upon the fact that, if we can make the images of the same object that are thrown upon the respective retinas so dissimilar as to destroy all desire for a single image, the ocular muscles will give up whatever struggle they are making to maintain that single image, and will assume their actual relation to each other. If they are making no struggle, that is, if the single image is obtained without any struggle, it will be maintained even when the images are dissimilar; but, if there is a struggle, that is, if there is a muscular imbalance, we shall uncover it by this procedure.

The Maddox rod, therefore, is mounted before one eye, with its axis horizontal, and the patient is told to look at a candle flame 6 meters away. To this eye, the candle flame presents the image of a drawn-out upright rod of white light. To the other eye, it presents the image of the ordinary flame—which is usually made still more dissimilar by putting a red glass in front of the eye. There is now so much dissimilarity between the two images that the muscles

give up whatever struggle they are making (if they do so struggle) to maintain single vision and assume their actual relations to each other. If there is no struggle, single vision is maintained.

With the Maddox rod, therefore, if the musculature is normal, the patient sees a red candle flame with a white streak of light running, up and down, exactly through the center of the flame. If he have imbalance, he will see a red candle flame with a white streak of light a little to one side or other of the flame, more or less to one side, according to the degree of his imbalance.

If the displacement of the two images is what is known as homonymous—that is to say, each image on the same side as the eye that sees it, the red flame on the same side as the eye with the red glass and the streak on the same side as the eye with the rod—then the imbalance is internal, due to hyperopia; if the displacement be heteronymous—that is, each image on the other side from the eye which sees it—then the imbalance is external, due to myopia.

The explanation of this crossed displacement is, that the image on the retina is an inverted one, the retina receiving rays from the opposite visual field. A glance at the accompanying illustration will make this clear.

Having found out whether the imbalance is internal or external, we then put prisms before the eyes, with their bases according

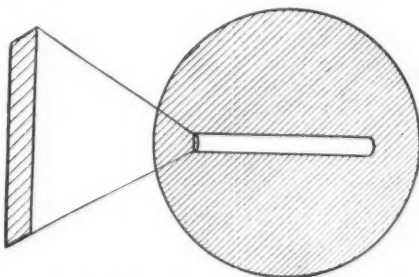


Fig. 6. Showing how the Maddox rod draws out a bar of light at right angles to its axis.

to the nature of the displacement—base in if the imbalance is internal, base out if it is external—until at last we find the particular prism strength that brings the two images together. This prism angle is the measure of the degree of imbalance.

In my next article I shall deal with the diagnosis and measurement of actual strabismus, and the methods of dealing with these muscular troubles.

The Medical Economic Situation

A Study of Plans for Professional Defense

By DANIEL S. HAGER, M. D., Chicago, Illinois

[Concluded from page 785]

IN CRITICIZING freely present conditions in the profession, we certainly should be ungrateful if at the same time we could not offer remedies for their correction.

The report of the Erie County (Pa.) Medical Society contains some solid food for reflection, and the portion naming as the causes for the contract-practice abuse is worth repeating; to wit:

"(1) Lack of knowledge of the ethics of medicine. (2) Professional jealousy. (3) Indifference of the older practitioners. (4) The example set by some of the older practitioners. (5) Overcrowding of the profession. (6) The tolerance of this state of affairs by all medical societies. (7) The commercialism of the age. The professional struggle, not only for the almighty dollar, but also for the mighty cent. (8) The chief cause of all, however, we found to be the complete disorganization of the medical body. This is the phase of the question to which we must give our attention, namely, the disorganization of the medical body."

Doctor, do you see that this disorganization of the medical body is one of the conditions that has kept, and is now keeping, medicine in the state it is in, and one of the conditions of which the politicians take advantage and, in the event of a national insurance law, will constitute one of the holds the politician will use as a lever to bring the profession under his thumb?

In Germany, I understand, many men belong to two societies. One society has to do with scientific medicine and the other with social-economic phases of medicine. And this is one of the things that, no doubt, will help to better conditions here, and which must be brought about sooner or later. In fact, the condition already is beginning to regulate itself in this way in several of the larger cities where the economic clubs are entering into this phase of the subject.

The economic medical society should concern itself with social-economic questions only, and leave scientific medicine alone; although it should seek to aid scientific medicine in every way possible so long as that means improved social and economic welfare of the profession.

Scientific medicine, on the other hand, should recognize the right of economic medicine and leave it leeway to go about its purpose. Scientific medicine should be supported with no more funds than are absolutely necessary to do its work, while economic medicine should be put into the best possible financial working-condition, have a manager, and issue literature in which all reasonable complaints could be voiced, besides adopting rules of ethics helpful in eliminating the abuses.

Please remember that the old-line ethical rules have, in the past, caught the little fellow, but the "biggun," with his special writeups and special editions heralding the wonderful ability of this clever kind of advertiser, has escaped, even though he may have freely boasted about his motives for the publicity he purchased through the press, as I have known one of them to do.

What the Economic Society Can Accomplish

The economic society should charge a good membership fee, but should give something substantial in return for it. Much could be done to help the practitioner to help himself, but it requires money to carry forward any work of value. Such an economic club in the larger cities, as New York, Chicago, Philadelphia, for instance, could form a central clinical center and help legitimate students and practitioners to gain practical knowledge and technic. Instead of a position bought with money or political influence that gives the holder a life-position, the higher offices should be given to those worthy, for what they had done for the profession, while the lower positions could be used for the benefit of the profession.

Men seek positions in hospitals and dispensaries mainly for the following reasons: (1) To have an opportunity to do scientific work and to advance medicine. (2) To gain experience, so that they may give better service. (3) To gain experience and reputation, so that they can obtain large fees by virtue of the prestige gained by such positions, as well as to get patients into their office from the clinics. (4) To keep in touch with the work and help the science of medicine in their particular line all that they can.

The commercialism of our age has made class three the ruling motive for professional service in the great majority of hospitals and dispensaries, and it is one of the causes of dispensary abuse. Ambitious doctors will do all they can to gain acquaintances and reputation and will court the prestige with all the business acumen consistent with the situation. Too often they will not hesitate even to injure those associated with them if they may thereby advance their own interest. There are many little "dirty" tricks that may be done without incurring any breach of ethics not ruling the ethical-relations committees. Appropriate new ethical rules will change the conditions.

A Central Clinical Home or Club

A central clinical home or club could, in this way, be built up in the larger cities, and these could later be made the home of all the societies and become the clearing-house for charity cases as well as a place where interesting cases could be shown. Such a clinical home or club could fulfil the requirements to help many a poor patient who does not wish to be pauperized by being treated at a dispensary but can not afford the price demanded by the specialists. Doctor Warner, of the Lakeside hospital, Cleveland, has put this matter in a very nice way, and his ideas are certainly just and ethical.

Such a clinical home could be financed and, I feel, would be liberally provided for by the profession, and ultimately might be made of great value to the profession and, in return, to humanity. In my opinion, it would ultimately solve the medical-charity-abuse question, for in this way the staff men as well as the patients would get under the control of the profession, and all the clinical material could be used for the benefit of the whole profession instead of for a few men on the staffs.

This centralization is, in fact, now going on in New York and has just begun in Chicago, and it must be brought about before much can be hoped from the medical-charity-abuse movement.

There is plenty of charity clinical material that should be made use of, but it is not available now, and; if I mistake not, more material will be needed ere long. For, I firmly believe that the present quiz-compend graduate, as well as the present system of hospital internship, is inadequate to supply the education that is needed in this day of practical things. A concentrated clinical course where the student sees and helps

until the conditions become impressed on his mind is the only logical means for practical instruction. A few clinical cases shown by some professor will no more make a student proficient to cope with the problems of general practice than such a theoretical course would make an astronomer. True, clinical cases are needed to simplify and emphasize the theories taught, but efficiency and proficiency can come only through handling cases personally.

The New Doctor Must Have Experience

Have we not for too long sent out inexperienced doctors? Is there any trade or profession that would not be in disrepute if raw, inexperienced men were sent out to build up structures where the very highest class of efficiency should be supplied? Is not the educational propaganda, through public-health lectures, newspaper and magazine articles, demanding that the physician of today must be able to meet these higher ideals of this greater age of education? Is it not logical that the man who has studied only a lot of theories will in a few weeks have forgotten these, and then will be as inefficient as ever? Is it not different, however, when he has handled and helped in the class of cases with which later he becomes confronted?

Seriously, do you think that a student working in a small hospital where the cases are limited to surgery gains that practical experience necessary to do a general practice? Does he see and handle enough cases in every line of ophthalmology, otology, laryngology, dermatology, orthopedics, and pediatrics to make him proficient to handle this class of cases when he settles in a community? Do you know that is exactly the reason why the cults and pathies flourish?

Who is to blame for this? Answer: You and I, who now allow this condition to go on, when we should endeavor to change this condition.

Danger from Over-Development of Hospitals

Can you not see that a young man or woman in the prime of life, giving the best part of his or her life to the service of an institution and without compensation, is building up this class of institutions at your expense? Do you know that these institutions are thriving as no other class have ever thrived? Do you know that practically every hospital in Chicago has been rebuilt, in the last few years, with more than twice its former capacity? Do you know that these hospitals have become arrogant and domi-

neering to a great extent and the superintendents, in order to keep the beds and wards filled, reach out great distances and offer free medical and surgical service for securing patients? Can you not realize that the experience and prestige gained, at your expense, by men on the staffs of these institutions gives them big fees?

When the interne and nurse, as well as the staff surgeon, give their service for nothing and all the little details are looked after free, why should these institutions not grow? Is there any wonder that, when the interne goes out, filled with high hopes and finding the chosen field usurped by the institutions, he engages in contract-practice or offers a big dividend to those who refer cases to him?

The Post Graduate Schools

The postgraduate schools, which in their day have served a useful purpose, are not practical now; for the present demands must also gradually be brought under this central control, since they, too, are looking for more clinical material. As long as these schools are allowed to depend upon the fees they derive for their support, just so long will they be inefficient and at the same time charge exorbitant prices for their inefficient teaching.

Branches under the direct control of the central clinical home could be established and in this way aid the central home, while at the same time the central home could aid the branches. This would bring the branches directly under the jurisdiction of the society. Postgraduate study should be encouraged, by giving better opportunities to gain practical experience to those who are trying to make themselves more proficient, and the post graduate work should be given to practitioners at fees that are consistent with the class of work that is being done. If the practitioner will build up his own institution, this could readily be done.

Please, remember that, if a national industrial insurance law will become effective, much material which on account of lack of money now seeks dispensaries will then go direct to the family physician, and there will

be a greater dearth of clinical material. Measures must then be adopted to secure more clinical material for the schools. Concentrated clinical finishing touches on the new graduate must come to prepare him to meet the higher demands.

Conclusions

1. New ethical rules should be adopted and enforced where new conditions demand them in the communities where the new conditions are manifested.

2. In the large city the clinical material should be gotten directly under the control of the profession and used for the benefit of the profession, so that men may become more proficient and give better service to humanity.

3. A concentrated clinical course should supplant the present inadequate hospital internship as preparation to do general practice. A concentrated clinical course or experience in general practice should be made a prerequisite to specialization. The internship should be reserved for those who wish to specialize in surgery and, as this involves hard work in the prime of life, some compensation should be insisted upon for such service.

4. We need a new society liberally supplied with funds, uniting all branches of the profession and taking up all the social and economic problems of the profession, with a salaried manager to direct its work. Scientific societies should be encouraged in their particular line of work, and maintained at membership rates that are consistent with the service bestowed. The society should aim to give returns for every cent the practitioner gives it in dues.

5. In the larger cities, we should have central homes for the various societies and these should be places where clinical material could be shown and practitioners helped. To this, I would add a pay loan library of modern medical books. Gradually also a profession-owned hospital system should be built up and other hospitals asked to join in centralizing clinical material for teaching purposes.



What Others are Doing

ANTITYPHOID VACCINE

Netler (*Ann. d. Méd. et Chir. Inf.*, Oct. 15, 1913) reports upon 20 typhoid-fever cases in which vaccinothrapy was employed. As soon as hemoculture confirmed the diagnosis, he injected a medium dose of bacilli of from 200 to 300 millions. He has obtained no good effects from doses of 25 millions. In his 20 cases, he could use only the bacterin in 14, of whom but one died. In the other 13, amelioration was rapid, and in five to eight days the temperature had fallen, urine was increased, tongue became humid, and the appetite returned. In some other cases, improvement was slower but no less manifest. There were three mild relapses, and two of these patients were treated successfully with injections of the vaccine. This is a smaller proportion of relapses than usual. No grave complications followed the vaccine injections, even in large doses. In one case, there was some influence upon the secretion of bile, and in another there were appendicular disturbances.

NERVE IMPLANTATION FOR RESTORING PARALYZED MUSCLES

Extremely interesting experiments (extending the work of others) in the direction indicated in the heading were described by Heineke, of Leipzig, at the 43d Congress of German Surgeons held in April at Berlin. (Cf. *Muench. Med. Woch.*, June 2.)

First depriving a muscle of the animal of its nerve, then implanting (without regard to locality) some other, nearby, motor nerve, the latter forms an intimate organic connection and restores functional life to that organ. Already after two or three weeks, we are told, the muscle shows a slight irritability, and after the lapse of some six or eight weeks the entire muscle contracts in an almost normal manner upon excitation of the recently implanted nerve. More wonderful yet—a muscle paralyzed for weeks or months, and rapidly degenerating, gradually becomes revived after the same procedure

and again exhibits normal irritability after a few months.

Subsequent experiments demonstrated in what manner the union of the nerve comes about. The axis-cylinders grow toward the muscle-fibers and, upon contact, produce fresh end-organs encircling the individual fibers. Seemingly, these fresh nerve-fibrils form within and follow along the sheaths rendered vacant by the disappearance of the original severed nerves of the muscle—this latter occurrence, hence, being a condition precedent to the success of the operation. This deduction Heineke draws from the fact that a healthy muscle does not respond to excitation of a nerve that has been implanted into it, as above described, as long as its proper nerves remain intact in their connections.

In the discussion of the paper, Erlacher (Graz) said he had been conducting similar experiments and had applied the idea in a case of paralysis of the trapezius muscle.

PLEXUS GRAFTING IN EXTENDED PARALYSES

Following the preceding speaker at the Congress, Katzenstein, of Berlin, (*loc. cit.*), expressed doubt as to any great practical value attaching to Heineke's work, inasmuch as his operation affects but an isolated muscle and for that the transplantation of tendons and (even better) of muscles already is at our disposal. On the other hand, the medical world has stood helpless when confronted by general paralysis of limbs. However, for these pitiable states the speaker claimed to have evolved a plan that had proved practicable, not merely experimentally, but in actual practice.

This new method consists in grafting a sound nerve of the opposite side into the plexus of the paralyzed extremity; the supposition being that the newly implanted nerve would proceed to grow from the plexus into the nerve-tracts of the affected limb. And this actually was found to take place. Thus, using a monkey, an arm was paralyzed (as in infantile paralysis) by

cutting the nerve at its anterior roots in the neck, the nerve graft was executed. With the assistance of Bielschowsky, multitudinous newly formed nerve-fibers were demonstrable clear into the minutest ramifications of the nervus ulnaris, radialis, and medianus. A similar revivification of dead nerves was traced in persons thus treated.

The speaker particularized several operations upon patients. In one instance of paralyzed arm, the nervus superclavicularis and in two cases the ramus descendens hypoglossi of the sound side was carried toward the plexus of the paralyzed arm by passing it behind the vessels between the esophagus and the spine. For a lame leg, the sound nervus obturatorius with all its branches was severed, carried across behind the peritoneum, and sutured into the paralyzed plexus lumbosacralis.

VARIOUS REMEDIES FOR DYSENTERY

Karl Justi, of Hongkong, recording his experience with dysentery in China (*Muench. Med. Woch.*, 1913, p. 764), carefully distinguishes between the bacillary and the amebic form. As to the latter, he states, he has had good results from the use of ipecac, but owing to its nauseant properties he prefers simaruba associated with antiseptics, a certain combination of which has proven equally as effective.

This favorite antidyenteric mixture has this formula: Simaruba bark, powder, Gm. 3; benzonaphthol, Gm. 3; bismuth subnitrate, Gm. 8; syrup of krameria, Gm. 30; syrup of acacia, Gm. 200. Dose: A tablespoonful every three or four hours. He relies upon the benzonaphthol and the astringents for destroying the amebic enemy.

Besides the foregoing, Justi also mentions kosamin and uzara as giving satisfaction. (Kosamin we cannot place just now; uzara is an asclepiad plant of central Africa used by the natives for diarrhea.)

Concerning the bacillary form of dysentery, the author claims to have found a certain fluid extract of the rind of garcinia mangostin fruit effective, this being rich in tannin. However, he claims that invariably a cure followed the administration of Koehler's mixture, consisting of the fluid extracts of simaruba bark, pomegranate, and Campechy wood. This, though, must be preceded by a good purging.

In the case of children, Justi treats bacillary dysentery with the following mixture: Extract of bael fruit, Gm. 5; aromatic spirit of

ammonia, Gm. 4; chalk mixture, Gm. 30; cinnamon water, Gm. 50. Dose: A teaspoonful every three hours. This will cure infants without a change in their diet (mother's breast).

Doctor Justi evidently had not yet heard of the wonderful cures effected with emetine; which, moreover, is free from the objection of inducing nausea in the same degree as the crude ipecac. Nevertheless, even though we have a good remedy, it always is well for a doctor to be in possession of a varied armamentarium—for the human organism reacts so capriciously, often, to remedial agents, and conditions may be so obscure that it is well to be able to try more than one treatment.

In the present case, the remedies, and their form, plainly are quite old-fashioned; still, sometimes treatments yield result where science—chemistry and pharmacology—cannot offer a rational explanation. On the other hand, tradition and conservatism are all there is to justify certain therapeutics.

Take simaruba. This is the root-bark of quassia simaruba, a tree botanically related to quassia amara (the nomenclature is confused). Before this fact was established, simaruba acquired fame as a "sure cure" for dysentery and chronic diarrhea, while quassia became famed as a bitter tonic febrifuge; and this distinction persists in the medical mind, although chemists find quassine as the only active constituent in both, with no important differences in the other principles. In view of these facts, it were time for clear-headed clinicians to take up quassine more energetically and prescribe it in all instances where tradition recommends simaruba.

Then there also is the case of the manifold vegetable astringents—oak-bark, kino, catechu, rhatany, blackberry-root, cranesbill-root, and all the rest of tannin-bearing plant-drugs—what about them? In Justi's communication we are confronted by three of the list, rhatany, logwood, and bael fruit! Still, one fact must not be lost sight of, namely, that the tannins of these various drugs are more or less distinct, peculiar substances, and not exactly identical.

CHROME POISONING

A case of death resulting from sodium bichromate has been reported in the *Deutsche Medizinische Wochenschrift*, (1913, No. 12). The victim was a dyer who had the habit of biting his finger-nails, and his sickness developed some ten or twelve days after work-

ing with that chemical. A prominent feature was the irregular, small, and accelerated pulse. Besides, the skin was colored markedly yellow and the sputum was blackish-brown. He died on the tenth day. The bodily secretions gave the reactions for chromism.

EMETINE IN AMEBIC DYSENTERY

At the meeting of the American Proctologic Society recently held in Atlantic City, two papers upon the treatment of amebic dysentery were read: the first by Dr. Alfred J. Zobel, of San Francisco, and the second by Dr. Wm. M. Beach, of Pittsburg.

The first speaker reported two interesting cases of the disease, in one of which the patient had been a sufferer for ten years, and the other for fourteen. In both these cases emetine hydrochloride was employed, and in each instance the amebæ, blood, mucus, froth, and foul odor disappeared from the feces within two or three days, and the number of stools was greatly diminished. At the same time the racking tenesmus, bearing-down feeling in the rectum, and the abdominal tension, discomfort, and gurgling absolutely ceased. Proctologic examination showed a favorable influence of the drug upon the amebic ulcerations. No rectal irrigations were employed.

Doctor Zobel also reported some interesting experiences with other cases seen by him in consultation. He is convinced of the necessity of proctoscopic examination of the bowel and of microscopical examination of the feces in every instance where a diarrhea lasts longer than a week, even though the patient has never lived in or visited a locality where amebic dysentery is known to exist. He also advises that emetine should be continued intermittently for at least three or four months, before the patient can be considered free from the possibility of a recurrence, even though he is clinically cured and the amebæ can no longer be detected in the stools.

Doctor Beach, in his paper, declared that amebic dysentery in the early stages may be cured with emetine, while in the somewhat advanced cases the drug certainly is efficacious, and at least clinically curative. However, he believes that the subcutaneous injection of emetine is not always sufficient, and he suggests the introduction of solutions of emetine through the duodenal tube, in order to bring it directly into the intestinal tract. In the very advanced cases, surgical intervention may be advisable for rapid cure; be-

sides, cecostomy and appendicostomy, presumably in association with direct irrigation through the fistulas thus created, are warmly advised. In most cases of amebic dysentery, Doctor Beach also thinks the appendix should be removed.

RECURRENCES OF AMEBIC DYSENTERY

Now that it has been demonstrated that there are occasional recurrences of amebic dysentery (which, however, are usually readily alleviated by repeating the emetine treatment), the advice given by Dr. Lucien Mayet in the *Province Médicale* (Feb. 21, p. 95) for the treatment of such relapses is worthy of special notice.

When the disease recurs some time after treatment has ceased, Mayet advises the following procedure, the treatment being divided into three stages:

First "cure:" Two subcutaneous injections of 2 to 4 centigrams (1-3 to 2-3 grains) each of emetine hydrochloride daily for three to five days. If the relapse is severe, the daily dose of the emetine may be increased to 12 centigrams (2 grains).

Second "cure:" A course of treatment similar to that already described is given ten to fifteen days after the first one.

Third "cure:" The treatment is again repeated twenty days after the second "cure."

Under such a course of treatment, in the majority of instances undoubtedly the *entamoeba histolytica* will be completely eliminated from the body.

If we may offer one additional suggestion, it would be, that the patient's lower bowel be washed out occasionally with a solution of quinine hydrochloride, so as to assure complete elimination of the parasite.

ANTISEPTIC INHALATIONS IN PHTHISIS

C. Muthu informs us (*Brit. Med. Jour.*, Sept. 13, 1913, p. 669) that since 1895 he has been using antiseptic inhalations in the treatment of pulmonary tuberculosis, in combination with other methods of treatment. He uses two methods, namely:

(1) The lamp-method, in which the formaldehyde is vaporized in a methylated-spirit lamp containing a hot-water boiler, the inhalations being taken in the patient's own room, with wholly or partially closed doors and windows, and for half an hour at a time.

(2) The continuous method, for which a specially designed inhaler is employed. Usu-

ally the patient is provided with the inhaler for two hours the first day of treatment, for four hours the second day, six hours the third, and eight hours the fourth and subsequent days. This inhaler is so constructed that the patients can keep it on while they are walking, resting, reading or playing games.

The following solutions are employed:

A.—Formaldehyde, 2.5 percent; chloroform, dr. 1; menthol, grs. 10; oil pinus pumilii, m. 10; alcohol, enough to make oz. 1.

B.—Formaldehyde, 5 percent; guaiacol, dr. 1; chloroform, drs. 2; menthol, gr. 15; oil pinus pumilii, m. 15; alcohol, enough to make oz. 1.

C.—Guaiacol, drs. 2; terebene, dr. 1; menthol, grs. 15; oil pinus pumilii, m. 15; chloroform, drs. 2; alcohol, enough to make oz. 1.

D.—Guaiacol, drs. 2; iodine, dr. 1; terebene, dr. 1; oil pinus pumilii, m. 15; chloroform, drs. 2; alcohol, enough to make oz. 1.

About 10 drops of the inhalant is to be sprinkled on the inhaler every half or one hour.

Aside from its directly modifying action upon the tubercular process, the inhaler has the advantages of affording protection against strong winds and dust when the patient is out walking; also colds and influenza are practically unknown in the sanatorium. When a cold is contracted on the outside, the use of the mask prevents the cold from spreading downward and starting fresh mischief in the lung.

CALCIUM-THERAPY IN TUBERCULOSIS

Some years ago Ferrier recommended the use of lime and the calcium salts in the treatment of tuberculosis, this therapy being based upon the theory that tuberculosis induces a decalcification of the organism. The use of this substance is warmly recommended by Max Kahn, in *The Medical Record* (May 23, p. 924). He quotes many authorities who have prescribed calcium in one form or another, and who alleged good results.

Personally, we have much faith in lime-therapy in this disease, especially when this agent is combined with other substances having a more specific action, as with iodine in iodized calcium. The reconstructive action of calcium plus the specific action of the iodine seems to give peculiarly good results.

We have been particularly struck by the desirability of using iodized calcium as a substitute for the potassium iodide as recommend-

ed by Curle, following the iodide with chlorine water, in order to get the specific action of the nascent iodine. In the few cases which have come to our attention, in which the combined iodized-calcium and chlorine treatment have been tried, the results have been excellent.

We shall be glad to hear from those of our readers who are experimenting with this treatment, and we shall be glad to give what assistance we can to those who desire to give it a trial. It certainly has promise.

NITROBENZOL AS A POISON

Perennially European medical journals—especially those in the German language—discuss the occurrences of poisoning from nitrobenzol, not a few of which result in death. One of the latest contributions, and instructive withal, appeared not long ago in the *Pharmazeutische Zentralhalle*, from the pen of Dr. J. R. Spinner, who has devoted considerable study to this important problem.

The reasons for these cases of poisoning are numerous, but resting largely upon ignorance of the dangerous properties of nitrobenzol, coupled with its cheapness as a perfume and flavor. Added to this, is the fact that this article largely is presented to the public under the guise of fancy or misleading names, the old-time "mirbane oil" being one of the most dangerous ones. (It has been used even for salad "oil.") Moreover, being volatile, this substance does harm, not merely upon being swallowed, but when inhaled; besides by its deleterious action upon the skin.

Because of its concentrated odor and taste, in conjunction with relative cheapness, the use of nitrobenzol (as oil of mirbane) has become universal—it is ubiquitous. Everywhere in products designed for daily use by the people at large one is confronted by the obtrusive odor of "bitter-almond"—hair-oils, mouth-preparations, cleansers, cheap perfumes, soaps, crèmes, lotions, shoe-polishes, leather-greases, salves, vermin-destroyers, paints, varnishes, what not; besides which it largely appears in culinary preparations as a bitter-almond and cherry flavor.

This is a matter which, undoubtedly, ought to receive closer governmental supervision and restriction; for, not only are people unwittingly harmed by the free use of nitrobenzol and not infrequently are poisoned by the mistaken use of such articles, but workers obliged to handle material of this kind suffer in health (even are killed) by constantly

inhaling the vapor of this deadly chemical or having their skin poisoned either by direct contact (greases, polishes) or even by the vapor. Furthermore, not a few sensitive individuals have been harmed by lotions, salves, and cosmetics thus perfumed. One can only agree with the author that the substitution of other, nontoxic, odors should be insisted upon by the authorities.

The phenomena of poisoning following in the wake of nitrobenzol, ingested in large dose or in small dosage over a long period or also when inhaled or coming in contact with the skin, have been given in summary by Dr. J. R. Spinner in his lengthy contribution to the *Pharmazeutische Zentralhalle* (1913, No. 35), and they seem worthy of quoting.

In the first place, when an unusual amount of nitrobenzol was ingested, its odor is imparted to the breath, excreta, and dejecta; especially in the usual vomit. Cyanosis is characteristic. The syndromes, in the various degrees and forms of poisoning, are enumerated as follows:

1. In mild cases: Uneasiness, headache, dizziness, nausea, loss of appetite, constipation, burning of the skin and mucosae.

2. In severe cases: Anxiety, disturbed sensibility (such as crawling sensation over the limbs, ear-noises), disturbed coordination (gait, speech), increased reflex excitability, jerking and spasms (later, with diminished sensibility), paralytic phenomena, vomiting. Furthermore: Icteric skin discoloration. At first increased then diminished pulse tension, disturbed vision (amblyopia, optic neuritis), blood becoming viscid and brown-colored; decrease and changed form of the erythrocytes, in the advanced stages, because of the methemaglobin resulting from their decomposition. Death, preceded by unconsciousness. In these cases, the phenomena of hemic destruction predominate over neurologic symptoms.

3. In subacute and chronic cases: The yellow discoloration of the skin gradually is displaced by cyanosis. Methemaglobin appears in consequence of degenerative processes in the blood. There is lassitude in connection with anemia, much resembling pernicious anemia. Tests may show the presence of nitrobenzol, hematorporphyrin, and albumin.

The author repeats the successful treatment (pronounced by him as rational) instituted, and as reported by Dr. O. Roth, of Zurich, in the case of 42-year-old woman who had swallowed a dessertspoonful of the drug in question, and whose condition was extremely precarious. Stated in general terms, his

treatment consisted in drawing 300 Cc. of blood, infusing normal salt solution, giving camphor, in oil solution, hypodermically, and providing oxygen for inhalation. She had been transferred to the hospital. Pregnant about two and one-half months, the woman failed of her object.

We have given this report at length because cases of nitrobenzol poisoning are likely to become increasingly frequent in America, especially in industrial centers, with the development of the chemical industries following the shutting off of importation from Germany. Within a week a severe case of poisoning from inhalation of this substance has occurred in the person of a trained chemist known to us, and employed by a pharmaceutical manufacturing firm which is now making nitrobenzol as an intermediate product essential to synthetic work of an important character. Fortunately this young man responded to energetic treatment, along the lines laid down above. Physicians generally should be prepared for cases of this kind.

CHOLIN IN THE TREATMENT OF CANCER

The British Medical Journal for December 13, 1913 (p. 1553), has an interesting abstract of an article published in the *Muencheener Medizinische Wochenschrift* for September 23, 1913, in which Professor Werner's experiences in treating cancer with cholin, used in association with radioactive treatment, are reported. He uses the borate of cholin, employing 2 or 3 Cc. of a 10-percent solution, diluted to 20 Cc.; the remedy being administered by intravenous injection. Injections are given once daily for three or four weeks, and the course is repeated after an interval of from four to six weeks. Arsenic is given internally, and if possible the patient is sent to a resort where the waters contain radium, besides being given direct radioactive treatment.

While Doctor Werner does not offer this method as a "cure" and gives no opinion as to the permanency of results, he states that he has been successful in causing the disappearance of mammary cancers in 10 cases, in spite of the fact that in 4 they had become generalized and the lymphatic glands involved. So, also, the neoplasm disappeared in 9 cases of inoperable malignant lymphomata, in 4 of cancer of the lip, 3 of cancer of the pharynx, 1 of malignant tumor of the sublingual gland, 2 of carcinoma of the parotid gland, and 6 of cancer of the face. In 6 cases

of gastric cancer and 2 of rectal cancer, the condition was greatly ameliorated. Also in 5 cases of uterine cancer the tumor disappeared, or nearly disappeared.

Altogether, the results were so promising that undoubtedly other experiments will be made with this remedy, although from the brief abstract it is difficult to determine whether the cholin or the thorium should have most of the praise for the results obtained.

It should be added that cholin is a very important ingredient of nerve lecithin, and for this reason its use as an adjunct to other treatment in cases of cancer is suggested.

ZENKER'S FIXING SOLUTION

The formula for Zenker's solution, employed for fixing microscopical preparations, is as follows: Mercuric chloride, Gm. 5; potassium bichromate, Gm. 2.5; sodium sulphate, Gm. 1; 5-percent acetic acid, Cc. 100.

DIURETIC ACTION OF CALCIUM CHLORIDE IN CHRONIC NEPHRITIS

In 9 cases of chronic hydropic nephritis, calcium chloride (0.1 to 0.24 Gram per day) exerted a diuretic action, according to W. Arnoldi and G. Brueckner, of the Polyclinical Institute of the University of Berlin. (Cf. *Ther. Monatsh.*, July, p. 532.) Curiously enough, the patients for the most part were put on a chlorine-free diet.

CAUSE OF THE IRRITANT ACTION OF DIGITALIS

Investigations conducted by Gottlieb and Ogawa at the Pharmacologic Institute of Heidelberg (Abst. in the *Ther. Monatsh.*, June, 1913) lead them to infer that the gastrointestinal irritation liable to follow large doses of digitalis preparations is the result of some nonremedial constituent of the plant, rather than of any active glucoside. At the time, they were not in a position to make a positive declaration but felt convinced that the peccant agent is a saponin.

The experiments were conducted upon cats, and the drugs employed were digitalis leaves and a digitoxin preparation of digitalis almost free from saponin. The side-effects of digitalis preparations, in the nature of irritation of the gastrointestinal mucosa, may be referred, of course, either to a central action of absorbed toxic doses or to some direct local action.

The time of appearance of the vomiting

furnishes the basis of the judgment. Thus, if the result of local irritation, then vomiting will occur within about the first hour after administration; while, if of central origin, this effect will not be observed until some six or seven hours later, and then would be accompanied by general symptoms. But the cats vomited after an average of 85 minutes when given 0.72 Gram of powdered digitalis leaves (equivalent of 1.6 milligram of digitoxin), while an equivalent amount of the powdered glucosidal preparation did not, in 12 experiments, produce that effect earlier than in seven hours.

These experiments, it is argued, indicate that the glucosides are less irritant to the stomach than digitalis leaves, which presumably owe their nauseant action to the saponin [digitonin] contained therein, and which causes vomiting through its effect upon the central nervous system.

GALVANIC TREATMENT OF SCIATICA

Ever since Stanowski recommended (*Deut. Med. Woch.*, 1898) his method of curing sciatica, Doctor Schurig, a military surgeon and an experienced neurologist, has practiced the same with satisfactory results. He has called attention to this method again (*Muench. Med. Woch.*, 1913, No. 33), saying he has had from it uniformly good, in fact extraordinary, results. Proceed as follows:

Apply the anode, measuring 20 by 30 cm., to the sacrum, and the cathode to the sole of the foot of the diseased leg, the pad covering it completely. Now pass through the leg a galvanic current extremely mild in the start and very gradually increased to 8 or 10 milliamperes; at no time must the subject experience the slightest discomfort. The session is to continue up to one hour, never less than thirty minutes. The electrodes must be well stuffed in order to adjust themselves thoroughly, and also to prevent cauterization.

One great advantage of this procedure is that it may be employed in an absolutely fresh attack. When other treatments had failed, the author always obtained relief from it after a very few hours, and a complete cure in the course of time. However, variations of the current must be avoided. A current of less intensity than named may be used. Failure of the galvanic treatment in the hands of others are ascribed to a wrong procedure: the technic described should be scrupulously adhered to—always bearing in mind the principle of using a mild current continued

over a long time whenever a sedative action is wanted.

HIGH-FREQUENCY CURRENT IN SCIATICA

The author just quoted (see above) also tells of his marked success, in the last few years, with the high-frequency current in sciatica. Here also he attributes failures to incorrect technic; adding that, should occasion present itself, he would not hesitate to resort to this treatment in fresh, acute attacks.

Firmly bandage a wet electrode to the sole of the affected leg, while to the other pole of a bipolar high-frequency transformer is attached a vacuum-electrode. The latter electrode is then passed up and down the course of sciatic nerve, starting at the sacrum, and continuing for fifteen or twenty minutes. As a windup, the vacuum-electrode is moved around for a little while over the region of the sacrum, so as to strike the point of issue of the diseased nerve, while the wet electrode rests upon the abdomen. The current may be full-strength from the first, no unpleasant sensations being produced.

As an illustration of recent occurrence, the author tells how a man was completely cured after 15 treatments who, when first seen, was bent over, using two canes, and hardly could walk to the office. Incidentally this patient experienced marked amelioration, apparent already after a few sessions, of cardiac symptoms (consequent upon insufficiency from aortic aneurysm); his pulse receding, from 100, to 80, and he becoming able to sleep soundly for nine consecutive hours.

Doctor Schurig considers the not altogether danger-free x-ray treatment for neuritis as not needed, in view of the certainty of this more handy and harmless one with electricity.

THE DUODENAL ENEMA: A NOVEL TREATMENT FOR THE VOMITING OF PREGNANCY

A novel, yet logical, method of treating the toxemias of pregnancy, especially the morning-sickness and vomiting, is proposed by Ellice McDonald, who writes in *The Medical Record* for July 18 (p. 102). This clinician is convinced that the chief factor in these toxemias is intestinal stasis, followed by fecal absorption, the latter particularly from the small intestine, and more especially from the duodenum.

During the last eighteen months, Doctor McDonald has treated 12 pregnant women troubled with vomiting, by washing out the intestine through a duodenal tube. He proceeds as follows:

A small rubber tube, of about the caliber of 12 F, with an apical as well as lateral aperture, is introduced into the stomach, the pharynx first being anesthetized by spraying with a solution of cocaine. When 22 inches of the tube has been inserted, 8 ounces of a sodium-chloride solution, a trifle stronger than ordinarily used, is injected. This usually checks the tendency to vomit. Thereupon the tube is pushed still further down, until about 28 inches of it has been introduced. Having loosened her waistbands, the patient now is placed upon her right side, in a semiprone position, and, after waiting a few minutes, suction is made by means of a vacuum-bottle and syringe attached to the duodenal tube, in this way withdrawing some of the contents from the intestine. If bile or intestinal juice is obtained, it is considered evidence that the tip of the tube has passed into the duodenum. It usually requires from five to seven minutes to get the tip of the tube through the pylorus.

At this stage, the physician injects through the tube a liter of a solution containing from 4 to 6 Grams of sodium sulphite. This solution usually passes through the intestine within thirty minutes, causing neither straining or pain, and no anal irritation. It washes everything before it, and the resulting stool is colored with bile and has the raw smell of the intestinal juice. Other salts, such as sodium sulphate, magnesium sulphate, table-salt or sodium bicarbonate may be substituted; however, Doctor McDonald has found the sodium sulphite most efficient in autotoxic conditions.

The author declares that this method of treatment has had an extraordinarily salutary effect in all the cases of toxemia of pregnancy which he has treated. Not one patient has required more than a single treatment, and of the 12 women treated only 1 has vomited after the injection was introduced. Not only has he found it remarkably valuable in the toxemias of pregnancy, but also in other forms of autotoxicosis in which the bowel was implicated; as, for instance, in diabetes and in various kidney and liver troubles.

Doctor McDonald believes that when this method of cleansing the intestine is employed operations for the treatment of intestinal stasis will not be required. He also suggests as a further mode of intestinal therapy

the possibility of introducing various intestinal disinfectants in this manner.

GELSEMININE IN MALARIA

Now that it is known that emetine will kill dysenteric amebæ, Dr. C. G. Roehr inquires (*N. Y. Med. Jour.*, May 30, p. 1110) why some alkaloid of gelsemium may not prove a cure for malaria. He reminds the reader that the old-time reliable observers found gelsemium of value in this disease, and asserts that, whenever the patient can take enough of this old-time remedy, it proves curative in his hands in all forms and all forms and all varieties of malaria, whether acute or chronic. And then he inquires: "How much longer must we wait for an alkaloid of gelsemium that can be used with safety?"

As a matter of fact, such an active principle we already possess in the alkaloid gelseminine, which undoubtedly represents the principal activity of the yellow jessamine. However, so far as we know no extended studies have ever been made of this alkaloid with regard to the possibility of its being a specific for malaria. We hope and trust that some of the readers of *CLINICAL MEDICINE* will attack this problem and report results in these pages.

Gelseminine is a powerful alkaloid, with a strychnine-like action, and, therefore, must be prescribed cautiously, beginning with small doses and increasing the dosage gradually until its full activity is developed. Possibly in treating malaria better results could be obtained with the combined principles (gelsemoids). We submit the question (with due credit to Doctor Roehr), once more expressing the hope that some of the family will take it up and report.

IS MERCURY THE ANTIPARASITIC CATHOLICON?

An astonishing theory as to the specific action of mercury in all bacterial diseases is announced by Dr. Barton L. Wright, of the U. S. Navy, in *The Medical Record* for July 11 (p. 49).

It will be remembered that some years ago Doctor Wright introduced mercuric succinimide for the treatment of tuberculosis at the U. S. Naval Hospital in Las Animas, Colorado, claiming for this substance a remarkable action in tuberculous cases. His work in this field has led him to the belief that mercury has a specific action, not only in tuberculosis,

but also in all the acute diseases directly produced by vegetable parasites. In order to prove curative, however, it is necessary that the initial injection must be extremely large, small and frequently repeated doses not being productive of rapid results.

In infectious diseases, mercury has a dual action: first, it unites directly with the bacterial organism and destroys it; second, it stimulates the animal body to the rapid production of specific antibodies.

In his clinical work, Doctor Wright has been employing mercuric succinimide, for the reason that larger doses of this salt may be injected than of any other salt of mercury; while, also, its parasitotropic property is many times greater than its organotropic advantages.

The initial dose, as already stated, must be very large, the requisite dose for an adult male being about 9.5 of a grain in the early days of an acute infection. At the end of twenty-four to thirty-six hours, if there is no improvement, a second injection, of from 5.5 to 6.5 of a grain is injected, providing symptoms of mercurialism have not followed the first dose. In other virulent and quickly fatal infections, such as cerebrospinal meningitis, the initial dose should be 2 full grains. In chronic infections, the average adult dose is somewhat smaller—from 5.5 to 7.5 of a grain.

In females, the dose should be from 1.5 to 2.5 of a grain less than for males.

Succeeding injections should be given at from two- to four-hour intervals, until ten or twelve injections have been administered; providing the symptoms have not disappeared in the meantime. After ten or twelve injections, the treatment should be interrupted for from two to five weeks, in order to permit of the elimination of the mercury and to prevent the organism from becoming immune to the action of this metal. During the treatment, the oral cavity and teeth must be kept clean, and the bowels must move freely every day. The only contraindication to its use is serious organic disease of the kidneys.

The solution employed is made in the proportion of 1.5 grain of mercuric succinimide to 4 minims of distilled water. This solution is to be injected deeply into the gluteal muscle.

Doctor Wright follows these preliminary remarks with reports of a large number of cases of different diseases treated in this manner with mercuric succinimide. Among these, are 35 cases of tuberculosis, 9 cases of lobar pneumonia, 6 cases of lobular pneu-

monia, 5 cases of typhoid fever, 39 cases of infectious arthritis, 8 cases of rheumatic fever, besides a smaller number of cases of erysipelas, cerebrospinal meningitis, and others.

Of especial interest is his experience with lobar pneumonia. Of the 9 cases treated, 8 he declares were cured by one injection, the crisis usually beginning within about seven hours after the injection, although in several it began within an hour. These injections were given, in the different patients, at different stages of the disease, varying from the first to the fifth day.

In all of his cases of lobular pneumonia, an immediate cure was obtained, although in one the action was somewhat delayed as the result of an infection of the middle-ear.

In typhoid fever, the results were not quite so striking, although really quite remarkable, the disease being cut short in most instances.

In one case of rheumatic fever, when injection was made at 10:30 o'clock in the morning, the crisis occurred at 4 a. m. the next day; at which time all pain virtually ceased.

It will be interesting to learn Doctor Wright's further experience with this remedy, as also the reports of such other physicians as may give it a trial. His earlier enthusiasm with mercury succinimide in the treatment of tuberculosis was somewhat dampened by the adverse reports of many physicians who failed to get as good results as he did. It is too much to hope that we have as yet discovered the catholicon for all infectious diseases.

CALCIUM TREATMENT OF LOBAR PNEUMONIA

A little more than a year ago Dr. E. E. Cornwall made the statement in *The New York Medical Journal* that calcium salts were peculiarly indicated in the treatment of lobar pneumonia. Later, in the same publication (May 30, 1914, p. 1070), he follows up this idea, and reports upon some 54 consecutive hospital cases of lobar pneumonia in which the patients were treated according to his ideas. In this series there were 4 deaths, or a death rate of 7.4 percent. Of the 4 who succumbed, 1 at least was an alcoholic, a man 49 years old; one was a woman of the same age who was moribund when admitted; another, a man of 58, had pulmonary edema at the time of admission, and a badly dilated right heart; the fourth to die was a boy of 11, who succumbed the day after defervescence from an undetermined cause.

The peculiarity in the treatment of these patients by Doctor Cornwall consists, first, in the insistence upon a nonputrefactive diet, and, second, in the inclusion of a sufficient quantity of the mineral salts, especially those of calcium, to make up the deficiency usually present in pneumonia.

The administration of these salts Doctor Cornwall considers of fundamental importance. At 8:30 in the morning, he gives 10 grains of calcium chloride, dissolved in 5 ounces of water; and this dose is repeated at 12:30, 4:30, 8:30, and at 11:55 in the afternoon and evening—making a total of 50 grains of calcium chloride in twenty-four hours. In addition, the patient is given at least 35 grains of sodium chloride, 95 ounces of water, and food to the amount of 1200 calories, the protein being cut down to 38 Grams. The diet consists principally of milk and barley-water, together with orangeade sweetened with milk-sugar. All food and liquids are given through a tube, without the patient being allowed to raise his head. Instead of the milk and barley-water, the patient may be allowed to take lactic-acid milk, peptonized milk or one of the predigested cereal baby-foods, dissolved in water. After defervescence a more generous diet is allowed, but the calcium chloride is continued until the fourth day after defervescence.

Doctor Cornwall advises extreme caution in the use of cathartics, although at the beginning of treatment, if the bowels have not moved in a reasonable time, a laxative should be administered. However, after the patient has been placed upon the limited nonputrefactive dietary recommended, the bowel contents generally are harmless.

Of course other remedies are employed as indicated, especially stimulants; those most frequently required being strychnine, caffeine, and digitalin. In extreme dilatation of the right ventricle, venesection is resorted to.

LIQUID PETROLATUM IN THE TREATMENT OF CONSTIPATION

One very striking effect of the work of the English surgeon, Sir W. Arbuthnot Lane, in developing interest in intestinal autointoxication, has been the reintroduction of liquid vaseline (liquid petrolatum, or Russian mineral oil of the Codex) as a remedy for constipation. Lane claims special advantages for this remedy, because it acts in a purely mechanical way, anointing the bowel and thus facilitating the passage of fecal matter, while, yet, not causing increased peristalsis

The *Province Médicale* for March 14 (p. 115) has a very interesting article upon the use of petrolatum in the treatment of constipation. According to the writer of this article, both vaseline oil (liquid petrolatum) and the official vaseline may be employed; but the former is to be preferred. This is the liquid obtained (according to the Codex) by treating Caucasian petroleum with sulphuric acid and then with soda, distilling off the product at a temperature between 335° and 440° C.

The writer of this article advises that the liquid petrolatum be taken early in the morning, removed as far as possible from the first meal—a full hour before, by preference. Taken after eating, the substance is said to act less favorably, and also may cause a sensation of heaviness at the stomach.

While liquid petrolatum commonly is used plain and is not unpleasant to most people, it may be rendered more palatable by the addition of some aromatic or an essential oil, black-cherry liqueur, for instance. Admixture with a syrup of raspberry or black currant serves the purpose nicely. The dose is, a tablespoonful in the morning on rising. However, often it is necessary to double these doses, and in beginning treatment it may be desirable to give larger doses for two or three days.

Petrolatum thus used is not absorbed in appreciable quantity, its action being purely physical and is exerted upon the entire length of the intestinal canal; in this respect differing from the vegetable oils, of which the larger part is digested and absorbed. Petrolatum modifies the consistency of the intestinal contents, lubricates the bowel, and thus facilitates the progress and expulsion of the stool. It also has a sedative action, allays intestinal spasm and delays toxic absorption. It is, therefore, especially indicated in cases of constipation accompanied by some degree of intestinal irritation and spasm.

The writer in the *Province Médicale* recommends the use of petrolatum in the treatment of hemorrhoids, prostatic disease, mucomembranous colitis, enterocolitis, hepatic insufficiency, and in the constipation of women suffering from uterine retroversion. It also seems to be useful in chronic appendicitis as well as in the constipation of typhoid fever, and also following operations upon the abdomen; indeed, in all conditions in which the employment of olive oil heretofore has been considered desirable, particularly in the treatment of hyperchlorhydria and its consequences.

The writer believes that the introduction

into pharmacy of chemically pure liquid petrolatum will permit of the extending of these indications. He suggests its trial in diverse infectious diseases of the intestine, in the treatment of patients troubled with intestinal worms, as well as in pulmonary tuberculosis, in which it seems to be of value, for some reason difficult to explain.

ONCE MORE ABOUT IODINE AS A HAND DISINFECTANT

More and more iodine in solution seems to be gaining in popularity and wider application as a disinfectant at surgical procedures; now a simplification of its mode of using is being advocated by a French surgeon, Billet, who writes about his method in the *Gazette des Hôpitaux* (1913, No. 146); his modification making it eminently applicable in emergency accidents and especially on the battlefield.

The special point of advantage in Billet's method is, the omission of first scouring one's hands and arms with water and soap, and merely treating the skin with the iodine lotion.

According to this experimenter, a 1 : 2000 solution of iodine in alcohol constitutes an antiseptic of the first rank and will effect complete asepsis within a very few minutes; furthermore, it may be applied as often in succession as desired without hurting the cuticle. As for prior washing with soapsuds, that not only is superfluous, but may even, it is asserted, sometimes prove injurious.

NEW METHOD OF HEALING FETID ABSCESSSES

F. Steinmann, of Berlin (*Proc. Congr. Germ. Surg.*, Berlin. cf. *Muench. Med. Woch.*, 1914, No. 22), recommends a new method of curing stinking abscesses by means of an uninterrupted current of oxygen or, failing that, of air.

Pass a rubber drainage-tube clear to the bottom of the abscess, then into the tube insert a smaller rubber catheter connected with a tank containing oxygen or compressed air; continue blowing for a length of time. Such a current dries out the channel, helps to blow out the secretion, and kills the anaerobic bacteria. Secretion and odor rapidly diminish and completely disappear in a few days; while the duration of the treatments may be shortened from day to day. The cure is claimed to be advanced by one half or more.

Another speaker—Tiegel, of Dortmund—advocates favoring drainage of abscesses by holding them open by means of a specially

constructed clamp, to be inserted into the wound in place of the customary tampon; the latter tending to hold back the foul secretions, besides excluding the air, while his clamp acts in an opposite manner. Healing occurs much more rapidly.

In this connection, Doctor Kuhn reminded the hearers of the beneficial action of sugar in suppurating wounds; at the same time suggesting that presumably the acids derived from the sugar neutralized the alkaline state of the cruror and thus removed an element favoring the noxious action of the toxins.

SOURING OF MILK DURING THUNDER STORMS

There has been much speculation over the reason why milk often sours and curdles so rapidly during thunderstorms, and it is now generally agreed that it must be the prevailing electrical conditions. Now, however, an investigator, A. Trillat, claims to have found (quoted in *Pharm. Jour.*, 1912, p. 345) another active factor in this phenomenon.

The gases of putrescence, Trillat asserts, accelerate the generation of acids in the milk when atmospheric pressure is reduced. Of course, the humid heat of the sultry weather is a further favoring element for the microbic proliferation, and then, under reduced atmospheric pressure, putridity-gases are more abundantly liberated, with the consequence as stated. This, Trillat believes, is a more potent cause than electricity.

The same conditions naturally hold good for the spoiling of meat. The author also suggests that this fact may account, not infrequently, for the sudden appearance of infectious diseases.

RELATION BETWEEN OVARIAN HORMONES AND THE UTERUS

Benthin has been investigating the interrelation subsisting between the internal secretion of the ovaries and the physiologic processes of the womb, and has presented his deductions, from his experiments (upon animals), to the Society for Scientific Medicine of Koenigsberg (cf. *Muench. Med. Woch.*, No. 22).

The ovarian hormones, we must assume, are deposited in the mucosa of the womb, where they produce a hyperemia and thus render it adaptable for conception; however, they are of limited importance for maintenance of the gravid state, inasmuch as only during the earlier months will this operation lead

to termination of the pregnancy. During pregnancy degenerative processes (hypofunctioning) are observed in the ovaries.

This latter fact, by the way, suggests that possibly the recession of myomas during the menopause is connected with this; while, on the other hand, myomas not infrequently are associated with hyperplasia of the ovaries. Furthermore, in osteomalacia, the interstitial tissue of the ovaries is found to become markedly developed.

The author further finds that the corpus luteum plays an important role (1) in the implantation of the ovum, and (2) in the formation of the placenta. After removal of the corpora lutea the course of the pregnancy is terminated, and there is no recurrence of menstruation.

Applying this knowledge practically: Taking note of the connection subsisting between certain anatomical changes and pathologic phenomena, clinicians began to administer ovarian preparations for acromegaly and preparations of the hypophysis in protracted hemorrhages.

Similarly the suggestion now presents itself, to give trial to extract of corpus luteum in premature incidence of the climacterium, as also in dysmenorrhea and related disorders.

NEW REMEDIES

Novatophan.—A London firm has brought out a synthetic as a superior substitute for the atophan of Schering, being a substitution-product of the latter. It is claimed to be the ethyl ester of methylated atophan, and, being insoluble in water, is tasteless. It is marketed in tablet form.

Melubrin.—This is one of the latest derivatives of salicylic acid, and is being praised by various writers in the German exchanges as especially efficacious in acute articular rheumatism. One of its essential advantages of related products claimed for it is, that it acts less upon the sudoriparous apparatus.

Embarin.—This is a water-soluble organic mercury compound pushed by the firm of Hayden, and German syphilographers are according it praise as a remedy in lues; one of the latest to write about it being Salomon-ski, of Berlin (*Muench. Med. Woch.*, 1913, No. 36), his trials covering more than 30 cases. While in a certain percentage severe symptoms (evanescent) of irritation proved objectionable, the others bore the injections (from 4 to 6 in all) without complaining. The curative results were satisfactory.

Miscellaneous Articles

How to Become Acquainted With the Alkaloids

THERE are many physicians who think that for them to adopt active-principle medication and to change from the old to the new would entail a great deal of study and trouble. In fact, this was the writer's own argument a few years ago. However, this is a grave mistake. The use of the active principles is really much easier than one would at first suppose, and their certainty of action makes prescribing them a pleasure. The physician who prescribes the old galenic products does so hoping that they will produce the results he desires; but when he prescribes the active principles he does so *knowing* that the results sought will actually be accomplished. There is no need for guessing or hoping that the results will be what you desire; results for good are sure to follow if you have diagnosed correctly and have prescribed intelligently.

It matters not to which school you belong, you will find that the active principles will make your practice easier and your results surer. Every physician owes his patient the very best known in medicine, and he does not fill that obligation unless he gives his patients the active principles. When you have prescribed them a few times and carefully noted the results, you will not hesitate thereafter.

To those who are skeptical, or doubt the efficacy of the alkaloids, or are prejudiced in any way toward this definite therapy, this writer will say: Just try a few of the active principles, using the same careful judgment you would when prescribing your own favorites out of the old list, then note results carefully. If you are pleased with these, as you are sure to be, then take up the study of a few more.

It is a mistaken idea to think that you must make the change all at once. In fact, the writer believes that it is more fair to the physician and the alkaloids to make the change very gradually. You can study the active principles, and at the same time use the older remedies where you are not sure of

your ground. As a matter of fact, it is believed that the real physician should always be ready to use that which will do suffering humanity the most good, always be ready to select that which will relieve or cure your patient in the shortest time and do it with the least possible risk, no matter where these remedies come from; whether the mineral, animal or vegetable world, or from the earth, sea or sky. No "pathy" or "ism" should debar the physician from selecting that which he believes or knows will be best for his patient.

Then, again, he should ever be ready to study and investigate and prove for himself where the claims of other men are true or false. Especially should this be so in reference to the claims made as to the therapeutic virtue of certain remedies.

The writer is sorry to say that there are some men in the profession who say, "The old way is good enough for me;" they have no time to study "these new fangled ideas," for they have evolved from the brain of some one who expects to reap a harvest therefrom.

Now, we do not deny that such may be the case in certain instances and with reference to isolated remedies, but, if the alkaloids are referred to, we must say that the reference is absolutely wrong. Not only one man or one dozen men, but hundreds—yes, thousands—of honorable physicians claim that they are more esthetic to handle, easier to give and easier to take, more convenient to carry, more economical, and in their therapeutic virtues vastly superior to the older products. Surely, these claims should carry enough weight to cause any physician who has his patient's best interests at heart to investigate, and to investigate thoroughly.

In conclusion, the writer will say, if the reader will do this, he feels sure that he will be a staunch friend of the alkaloids thereafter.

C. W. CANAN.

Orkney Springs, Va.

[Doctor Canan is absolutely right, of course. That the active principles are vastly superior to the galenic preparations, from every point of view, every doctor who has actually used them for some time in practice will assure you. The trouble is that the average man balks at the change. He is afraid of himself—over conscious of his own ignorance. Just get him started—just get him to learn how easy it is to use this class of remedies (and how satisfying) and he becomes an enthusiast.

The right plan to follow is that advised by Doctor Canan: "Just try a few of the active principles, using the same careful judgment you would when prescribing your own favorites out of the old list, then note results carefully."

May I suggest a few that you may well begin with? Here is a short list:

Aconitine. This is the remedy "par excellence" (as Burggraave used to say) for all the sthenic fevers. It is useful in the eruptive fevers, colds, bronchitis, and a horde of other diseases.

Digitalin. The most powerful heart tonic. Its uses are well known to you, of course. Combine it with the aconitine in asthenic types of hyperthermia.

Strychnine arsenate. The best salt of strychnine for permanent restoration of tone. The arsenic radical gives it a blood-building power not possessed by most of the strychnine combinations.

Atropine. It has many indications (see Doctor Redfield's article this issue) but the most important uses are *arrest of spasm* (from whooping cough to enuresis, including all spasmodic pains), *arrest of secretion*, and to control conditions inducing temporary *pallor of the skin*—due to vascular spasm. It is of great value as an emergency remedy; and in arresting hemorrhage it has only one rival—emetine.

Glonoïn (or nitroglycerin) is not an alkaloid, but it is an emergency remedy which every "alkaloidist" carries with him. For fainting, shock, or struggling heart it is indispensable.

Podophyllin is our best vegetable laxative. It is usually given in association with *calomel*, and followed by a laxative saline. Sometimes *aloïn* is preferred, or a combination of laxatives, such as are obtainable in Waugh's anticonstipation granule. Several good laxatives should be in every doctor's case.

Codeine is the best all around single anodyne. It is not as powerful as morphine, but it disturbs secretion less, and is better for children. The anodyne for infants granule makes a nice combination, which not only

can be used to relieve baby's colic, but also mother's cough.

Arbutin. The best vegetable diuretic and (in a limited sense) urinary antiseptic we know. Yet how few the doctors who are acquainted with and use this "precious remedy"—quoting Burggraave again.

I might lengthen out this list indefinitely; but, like Doctor Canan, I am anxious to persuade you to begin with a few of the active principles. Get a little case filled with some of these remedies, put it in your vest pocket ready for emergencies, and test the alkaloids in your own work. Even if you prescribe ordinarily you will find many conditions where the case and its contents will be mighty handy to have with you.—Ed]

THE USE OF EMETINE FOR AMEBIC INFECTION

The patient in this case was my wife. She had been in good health up to two years ago, then became infected with amebiasis from eating fresh vegetables during the early fall months of 1912 while we were residing in Belgian Congo, Africa. The first acute symptom was a severe hepatitis occurring in November. The dysenteric ameba was found in the stools. Mucus was present, and more or less bowel irritation, but no active diarrhea. We at once embarked for England, reaching London during the later part of December.

Several small doses of extract of ipecac were given during our voyage. The hepatitis improved, but the colon and appendix became more involved. In London, Doctor Daniels, Sir Patrick Manson's associate, examined the patient and prescribed emetine hydrobromide, to be given intramuscularly, 1-6 grain twice daily. We started for the United States in three days. Owing to very stormy weather on the ocean, besides insufficient facilities, only a few doses of the prescribed remedy were given. We reached an Omaha hospital in ten days.

The internists at the hospital were not familiar with emetine treatment in amebiasis, so, it was not continued by them. Instead, extract of ipecac was administered in enemata by means of Eichhorn's duodenal tube. and also in the form of salol-coated pills, according to Simon's method. Both these methods caused a good deal of disturbance and were difficult to carry out. Nevertheless, improvement followed and the patient left the hospital after six weeks, although not entirely recovered. About four weeks later came the first

relapse, with hepatic tenderness, griping in the colon, mucus in the stools, tenesmus, and a slight elevation of temperature.

As I had then become more familiar with the emetine therapy, through reading in *The British Medical Journal* of Rogers' experience, I again started to give the alkaloid. I gave emetine hydrochloride, 1-3 grain twice daily, intramuscularly. All symptoms cleared up in a few days, and they did not reappear for the next four months. At the end of that time (during the latter part of July, 1913), the patient was confined. It was an extremely difficult labor, and very bad lacerations occurred. As a result, the colon became partly paralyzed and no bowel movement occurred for ten days.

This constipated condition was highly favorable to a relapse of the amebic infection, and it promptly followed. The amebæ were swarming in the stool. Emetine was again given by the usual method, increasing the dose to 2-3 grain twice daily, until 6 grains were administered. The mucus, griping, and tenesmus of the bowel promptly disappeared.

The effect was not permanent, so that a slight relapse occurred about once every four weeks during the next six months; however, a few doses of emetine dispersed all symptoms after each such attack, until the latter part of March of the present year. Then began a periodic rise of temperature, which continued about three days a week; then subsiding, to reappear the following week. The temperature never exceeded 103° F. The hepatic region now was very tender, and at times the pain was extremely severe. There was also a good deal of griping and tenesmus of the bowel; the amebæ also again were present. Emetine was given from time to time, with varying degrees of success. During this time the patient was also suffering from a suppurative kidney.

After ten weeks' illness without making much headway in the treatment, one of my former preceptors advised me to try larger doses of emetine, and this was done. Twice daily 1 1-3 grains of the alkaloid was given, hypodermically or intramuscularly, until at length nausea became pronounced. Then the dosage was reduced to 1 grain twice daily, and continued at that until 14 grains of the drug had been given. This controlled the unfavorable symptoms for two weeks, after which the temperature again began to rise. Then the patient was taken to Omaha and an operation performed. A suppurative kidney was removed. The liver was ex-

ploded, but appeared to be in a healthy condition.

Since then there has been a gradual improvement, and in spite of the severe operation there has been no relapse. But, at the last examination of the stools, about two months ago, the amebæ still were found present.

The total amount of emetine given at different periods will aggregate about 36 grains. I believe emetine is destructive to all amebæ in the system, except those in the intestinal canal.

ANTHONY PARSONS.

Valley, Neb.

[The specific action of emetine in dysentery has been conclusively demonstrated. It is now known to be a positive cure for amebiasis; yet in severe types there is a tendency for the disease to recur. To prevent this, it is now the general practice to repeat the course of treatment after an interval of a month, and again at a like interval, even if no symptoms of dysentery are present. If this method is followed, in an overwhelming majority of cases the disease can be completely eradicated. A daily dosage of from 1 to 1 1-2 grains, given in two or three injections, is usually sufficient; and a few days continuous treatment is generally desirable at each interval.

Enemata containing emetine, to cause the destruction of the amebas in the bowel, have been tried, but have proven too irritant. When local applications seem indicated, quinine solutions may be used to wash out colon and rectum. This substance is markedly amebicidal.

Doctor Parsons' wife was peculiarly unfortunate in suffering from a complication of disorders. When we consider that beside the dysentery she went through labor, and had a pus kidney removed, all within a few short weeks, it is really remarkable that she made such a rapid and happy recovery. Cases like this intensify our faith in emetine—a wonderfully useful alkaloid whose great value we are just beginning to comprehend.—Ed.]

DAEMMERSCHLAF, DUMMERSTREICH, UND KOPFLOSIGKEIT

The three foreign nouns constituting the headline might be translated as "crepuscular lethargy, a silly trick, and headlessness." But, why the German title? O, just because it goes so well. Has not the whole profession

been fairly hypnotized by the output of dye-works under the mellifluous title of *farbenfabriken*? Is it not now to be robbed by the word *daemmerschlaf*? Is not a thing, well known and widely used in general but neglected by maternity hospitals, to be appropriated, advertised, and the public educated to the belief that it can be found only in certain particular hospitals, as named in the reading-matter in the lay press? Is not the medical profession debarred from utilizing that press, and, so, because of this enforced silence, necessarily looked upon as ignorant?

One thing, at any rate, is very certain—*Kopfslosigkeit* (headlessness) is *not* manifested by the astute exploiters of the profession. *CLINICAL MEDICINE* for August contained a fairminded editorial on the subject of *Daemmerschlaf*. It was written in answer to a question, and it was quoted by *The Literary Digest*; however, the very nub and heart of the matter, the statement that members of the *CLINICAL MEDICINE* "family" were exempt from certain strictures, was omitted from the quotation. Apparently no headlessness here—still, that may depend upon the "point of view."

Most women desire to get their babies at home. Yes, and they have done so in comfort for many years, thanks to hyoscine-morphine. But, think of the lure of the much advertised, "something-new," sleep, which must be surrounded with "very special precautions and most unusual vigilance." If you, doctor, have used this hyoscine-morphine sleep for years, say so, and see how many believers you can find. Is it a lure? Yes. A silly trick? Yes.

But, anyone who banks on German ignorance is a sure loser. The whole scheme of *daemmerschlaf* may be thin, gauzy, and ridiculous, but it will work; perhaps not up to the high level of "*farbenfabriken*," still very nearly so. Are Germans and German doctors fooled? Not for the infinitesimal fraction of a second. *Kopfslosigkeit* is not one of their characteristics. They understand well the mark "Exporten." They need it in their business: for marking things not for home consumption. Headlessness of great intensity, especially the medical-subject variety, is an American product and gives point to the German proverb, "Stupid sheep will sleep many in one stall."

To sum up: The medical profession has a good thing in its hyoscine-morphine-anesthesia. This method has not been employed in large maternity hospitals to any

extent. The profession is to have its good thing nullified by a lay-press crusade designed to educate the public to go to certain places to receive treatment which the nearest physician as a rule can administer. A silly bluff? Certainly. Will it carry through? Also certainly.

I just wished to say to the *CLINICAL MEDICINE* "family": "Boys, you are done! What are you going to do about it?"

DOUGLAS H. STEWART.

New York, N. Y.

[In New York, we understand, special maternity service, with Freiburg trained doctors, is already being provided in certain hospitals. Nevertheless, we are sure that most American women will still prefer to have their babies at home, under the care of doctors who know how to afford painless delivery under natural conditions and congenial surroundings. Read Doctor Ellingwood's article, this issue.—Ed.]

AN OPENING IN CHINA

Two million people, and only one doctor. Seven doctors, each with a territory holding two million souls. These are the facts of the medical situation in the part of China around the American Board's Shansi Mission. In addition to the surgical cases which are brought from many miles distance to Dr. Percy T. Watson at the Board's dispensary in Fenchow-fu, the prefectural city which is the Shansi Mission's headquarters, there are many out-stations where patients are cared for in school-rooms, in inn-yards or wherever the doctor can find a vacant room when he is on his tours, while seven or eight opium-refuges are managed from Fenchow-fu.

TWILIGHT SLEEP, PREJUDICE AND IGNORANCE

I have just read what you say, in the August number of *CLINICAL MEDICINE*, about the letter received relative to the matter of American physicians not generally using hyoscine and morphine to make childbirth painless.

Perhaps one may not blame the woman for writing as she does, and there may be some excuse for writing as she did, but there are many things to be said on the other side.

I read that article in *McClure's* to a woman within a month of her confinement and told her that I had made use of that treatment for years. Do you think she called upon me to

confine her? Indeed, not; but she did, against her husband's wishes, employ one whom she had no reason to suspect of using the treatment. It made me quite hot when I read the article, and, she being in my home at the time, I read it to her and commented forcibly on the injustice of printing anything like that without knowing whether or not there were hundreds of physicians in this country making use of the same method.

There is no doubt but that many women financially able to do so will go to the trouble of a trip to Europe for confinement, when they could have the same drugs administered to them here in hundreds of places.

It is easy to blame the doctor for almost everything, no matter whether he is to blame or not. I always offer to administer chloroform in my cases of confinement, but in more than half of them it is absolutely refused, as is hyoscine-morphine, even after I assure the woman that there is virtually no danger, while it does make a vast difference in the pain experienced.

It is about the same when I offer to use the forceps. Over and over again good old Father Grosvenor told us that the forceps were benign in the most benign cases; and I firmly believe that is true in every case where the physician knows how to handle the instrument properly, at least, where he knows enough not to damage with them. However, more often than not, when I propose using the forceps, explaining that there will be no possible harm and that there will be hours of suffering saved, in many cases—and enough times to make it well worth while in most cases—I am not permitted to resort to them.

Now, I ask, how in the world can a physician, no matter how up to date and willing he may be, give the best service when the patient balks? There may be some physicians who do not believe in mitigating the pains of childbirth, but I think most of them are of the other sort. The greatest trouble is that most lay people think they know so much more about proper treatment that they almost invariably block the doctor's best efforts, and then, if the results are not all they desire, they do not hesitate heartily to berate, if not curse, the doctor.

And where mainly do they get all this great knowledge (?) if not from just such articles as the one in *McClure's*? The people do not stop to analyze the matter. They have come to think that what they read in high-class magazines is authoritative; yes, even what is printed in the daily papers is

fully believed by most people, no matter if the one who wrote it simply intended it for a joke. I have often said that one can become well informed if he will read the daily papers, for they print much splendid information; still, it is necessary to discriminate intelligently between the probable and the improbable.

It is astonishing how otherwise sensible people will freely offer advice upon subjects about which they know nothing. And these persons, if asked when and where they qualified themselves to give such advice, will promptly deny ever having made a study of the subject.

Oftentimes this thing does not work any particular harm, but there are cases where they influence others to change treatment, when they are receiving the very best to be had, and when, if this treatment is not continued, they will lose their lives. If one were to call such an adviser a murderer, he would feel hurt, to say the least; yet, he is certainly as much to blame for the death of the one who accepted his advice as though he had killed him outright.

It is the same old story—ignorance is at the bottom of nearly all woe, and the saddest part of it is that most people refuse to be enlightened. People—almost all people—are hypnotized by their beliefs. It is highly unnecessary for them to *know* things, they are more than satisfied to cling to and be governed by their beliefs, irrespective of how false they may be. And woe unto the one who ventures to assail their beliefs!

And right here I cannot refrain from giving the medical profession another rap. Just as you say, Mr. Editor, the majority of them are opposed to any change or innovation. I say it in all kindness: there are in the medical profession many of the worst bigots on earth. They, too, are governed by their beliefs, not realizing that no one has a right to continue blindly believing anything indefinitely. In time, one should be able to prove things; and then he *knows*, it is no longer a mere belief. If medical men generally did their duty, if they informed themselves as they should upon all subjects on which they profess to be authorities, there would be such a great change that lay people would be less likely to presume to encroach upon matters which only medical men should deal with. They would realize that they were not competent.

But, when it is absolutely true that there are many duly authorized and legally qualified medical men whom the average woman of experience and intelligence can excel in many

things pertaining to their work, it is not strange that after awhile these women, as well as many others who know of such instances, come to feel that they have a right to advise—more particularly when their advice is free, while that of the medical man is considered expensive.

What reasonable excuse can a doctor of today give for not being up in his work? Surely, there are facilities for learning all that should be known, and as yet the people will permit a doctor to practice upon them. However, it appears to me as though that time were drawing to an end, and rightly so. Even a beginner now has little excuse for not having information that should be easily put to the test which would convert it into knowledge.

Wide publicity is a splendid thing in case of correct information, but, when newspapers and magazines publish articles on subjects of which their editors know nothing, nor do those who wrote them, it is to be regretted that they do not seem to appreciate the great harm they may do.

E. W. FEIGE.

Woonsocket, S. D.

[There seems to be a principle involved in the doctor's communication which pertains, not only to the twilight sleep discussion, but to every item of the physician's work, namely, that he is obliged to be more than a mere repository of knowledge and skill and armamentaria if he is to successfully practice scientific and up-to-date medicine; he must be a psychologist, with the knack of dealing with men and women and of instilling into them—even imposing upon them, if necessary—confidence in, and compliance with, his requirements.

Most patients, especially women patients, will resist, or at least protest against, diagnostic and therapeutic procedures with which they are not familiar, or which involve fancied risk or embarrassment; and it is part of the physician's task, not only to stand ready and able to give them the benefit of such procedures, but to persuade, even to the point of insistence where it seems necessary, these reluctant individuals into accepting them. Most women will object to a physical examination, for instance, where they have never undergone one before. But a little intelligent psychology will usually overcome their unwillingness, and even bring them to a point where they desire it.

No doubt other practitioners are experiencing the same attitude on the part of their

patients in regard to the twilight sleep that Doctor Feige is having. It is a place for the exercise of the psychological factor. Once the objection is overcome and the advantage of the sleep is experienced, two results flow out of the experience: the patient is convinced of the benefit of the procedure, so that she will demand it at her next confinement, and she acquires added respect for the physician both for his skill and for his firmness. So far from regarding this "balky" attitude of the patient as a defeat, and becoming discouraged over it, we urge our correspondent, and all of our readers who are having similar experiences, to look upon it as an opportunity for making a conspicuous conquest; for one such resisting patient overcome and won over is of more value to the cause and to the physician's reputation than ninety-and-nine that need no winning.—ED.]

EUROPEAN IMPRESSIONS

In the latter part of July we were in Paris. How one's preconceived impressions of persons and places collapse in the presence of the real! I was prejudiced against Paris—for what reason, I do not know—and, yet, I enjoyed it the most of any city visited.

Paris is beautiful. Its parks and boulevards and its famous galleries and buildings, rich not only in works of art but in historical associations, appealed to me very much. It is essentially a Latin city, and many times I was reminded of Havana and other cities of Latin America.

The one "fly in the ointment" was the public flaunting of vice, not alone by the women of the street in plying their trade, but by men as well. In no other European city have I been accosted by women—and men—of the street.

Some of the principal streets were lined with petty gambling-devices and frivolous amusements, with all the gilt and tawdry glamour of a circus. I wondered, as I observed the inferior size, the dandified dress, the effeminate appearance of the men on the streets of Paris, whether they would be able, physically, to uphold the glorious record of the Frenchmen of other days.

Another striking impression was, the absence of games that called for physical exercise—no baseball, no cricket, no tennis; nothing of the kind save horse racing. Still, Paris is not France, and it is to those who labor and live upon the soil that all nations must depend for a physically vigorous people.

From Paris, we passed over the beautiful rolling fields of north-eastern France. The peasants were cutting fields of fine alfalfa and grass for hay. Patches of rye and wheat were beginning to grow golden ripe, for the harvest. It is difficult to imagine this beautiful farming-region now devastated by war: the pleasant homes are blackened ruins; the wheat, rye, and oats have furnished fodder for cavalry- and artillery-horses or have been trampled into the ground that has been saturated with human blood.

Leaving France, we came to the "lowlands" of Belgium, and then, the familiar words of Cæsar vividly came to my mind, "All Gaul is divided into three parts, one of which is inhabited by the Belgii"; while now, after reading of the heroic defense of Liège, one also recalls that further statement, "Of all the inhabitants of Gaul, the Belgii are the bravest." We had seen many soldiers in Paris, but supposed that to be a normal condition. When we reached Belgium, the movement of troops was very pronounced. Even at the Hague as we were visiting the Peace Palace batteries of artillery went rumbling by.

Proceeding to Holland, we found the streets of Rotterdam filled with sturdy Dutch—the young, excited, the older anxiously watching the bulletins relating to Germany's declaration of war against Russia and France. The reserves were flocking to the colors, among whom there were fair haired, rosy-cheeked boys, some no taller than the rifles they toted. Officers were commandeering horses, and the peasants' wagons were left useless in the streets. Returning from a visit to the National Serum Institute, we found our hotel had been taken for military headquarters. It was interesting to note the effect of war conditions upon the various tourists. Some thought the whole thing a joke, others wanted to appear as heroes and assert their "rights as American citizens," while the philosophical ones made the best they could of the inconveniences of war.

We sailed from the Hook of Holland, and when in time we steamed into the harbor of Harwich, England, a fleet of scores of destroyers with steam up were tugging at their anchor-chains like dogs in the leash eager for the chase. The scene impressed one with Great Britain's naval power and its readiness for action.

All London, and probably all Britain, was laboring under a great strain. No one seemed to doubt that Great Britain would

keep her pledge to Belgium; still, one could almost hear a national sigh of relief when the die was officially cast. There was little excitement in London. Crowds gathered in front of the War and Admiralty buildings, on the Strand, and in Trafalgar Square, but I do not recall hearing a band play. The only music heard was the call of the bugles, the only cheering, when the King or some cabinet minister passed in the street. There seemed a grim, determined, bulldog spirit in the air. Regiments of strong, vigorous young men in khaki and Scottish regiments in kilts went marching away to an unknown battle ground.

There was a "do or die" spirit that was mighty impressive. From Australia, Canada, India, and the "Islands of the Sea" came a loyal response to the Empire's battle-cry. Great Britain was preparing very methodically for a long and terrible contest, but there was no shrinking. I heard many expressions from Britons, that there was no bitterness against the German people—only against the "war lord" and the military despotism that had threatened the peace of Europe so long and imposed such heavy burdens of armament. There seemed to be the feeling that when the great conflict was over it would make for peace. My one great and lasting impression of England is of a people who realized to the fullest what a terrible struggle confronted them, and they were making the sacrifice with a grim determination after having counted the cost. They were in no doubt as to the final result.

At the hotel in London, I met my friend Professor S., a young German college professor who had been in the United States a year. He had come to London to attend the International Veterinary Congress, only to find a call to join the German colors. He said, with tears in his eyes, "I don't want to fight," but in an hour he was on his way to the scene of war.

We returned to Halifax, N. S., second-class on a freight steamship, stopping two days at St. Johns, Newfoundland. Here the naval reserves with sea-tanned, weather-beaten faces and hands horny from handling ropes were flocking to their ships. They marched down the hilly streets to the wharf, with the "rolling gait" of those used to the sea.

At Halifax, the "colonial troops" were leaving for "over-seas." Long-limbed, clean-cut fellows were saying "goodby." Soldier husbands hugged their little ones in their arms as they marched to the station, while dry-eyed anxious wives walked beside them

or sweethearts, with tears and smiles, bade their lovers "God-speed."

All the little villages in the French-Canadian provinces were sending companies of young men to war with cheers and music. Here, the band was playing martial music; here the cheering crowd, the torches, and excitement; but as the train rolled away into the night there were many aching hearts that stayed behind.

In lower Canada, there was scarcely any excitement, but we saw trainloads of khaki-clad, business-looking young Canadians, all responding with set, determined faces to the call of duty, to give their lives, if need be, for "Our king and empire." We could not resist the call of race, and we gave them three hearty American cheers of "good luck and God-speed" as their train rolled away toward the sunrise.

N. S. MAYO.

Chicago, Ill.

OSLER'S SPOTS

Two recent cases, both young men, who were not well, but still working, one in whom the endocarditis was known to exist, and the other in whom it was only discovered after examination, are the occasion of my calling attention to this apparently little-known sign.

Apart from ordinary subcutaneous edema, in cases of cardiac dropsy there are a few phenomena to be observed in the skin and subcutaneous tissue, which are dependent on some form of cardiac disease. One is very important, inasmuch, as far as I know, it is only met with in heart disease and is of diagnostic importance, since it not only, certainly, indicates the presence of heart disease, but the nature of the disease from which the patient is suffering. I refer to Osler's sign. In cases of chronic or subacute malignant endocarditis, minute, circumscribed, painful, erythematous swellings occur in the skin and subcutaneous connective tissues, especially of the hands and feet. They are painful on pressure and gradually disappear in three or four days, to a week or more. Each of these spots or lumps is due to a local acute inflammatory exudate around a capillary or (possibly in the case of the larger lumps) an arteriole which has suddenly become plugged by a minute infective embolus from a vegetation in a heart affected with endocarditis maligna linta.

In such cases the infective agent, though pyogenic in character, seems unable to excite

suppuration in any of the embolic infarctions which occur in the skin or elsewhere, lungs, spleen, kidneys, brain. The failure to cause suppuration may depend on low virulence of the organisms, or on the nature of the resistance in the blood and tissues of the patient. The minute cutaneous foci in question, may not be always due to an actual embolus from a cardiac vegetation, but to a local stoppage of microbes circulating in the blood, setting up a circumscribed acute inflammatory process about the wall of the capillary or arteriole on which the organisms have lodged. I am not aware that any of the little painful spots or lumps have been satisfactorily examined with the microscope.

Osler thus described what are now known as "Osler's spots." They vary considerably in size, from a pin head to a small pea, and may or may not be raised above the level of the skin. They also vary in color. These differences depend on the severity and stage of the local inflammatory process and the depth of the focus below the surface of the skin. The smaller and redder the spots, such as are generally seen on the fingers, probably arise when the inflammation is very superficial, while the larger and less highly colored tender lumps, up to the size of a small pea, occur when the focus of inflammation is more deeply seated. The larger ones last a few days longer than the smaller ones. The smallest appear as punctiform erythematous spots on the tips of the fingers and elsewhere. When they first appear, they are tender and associated with slight redness and swelling, but in two or three days the pain, together with the blush and swelling disappears, leaving a small, erythematous point behind, which is not necessarily raised above the general level of the skin about it.

I have used the term "Osler's spots" because it was Sir William Osler who first described the spots in question and called attention to their full diagnostic importance and distinguished them from the ordinary purpuric eruptions, not rarely met with in cases of malignant endocarditis.

Indeed, there are many cases of chronic malignant endocarditis, which may be termed ambulatory, because the patients can often get about and even do work; they may occasionally lose their fever for a time or may become so accustomed to it, that they ascribe it to other causes. Such persons may have the physical signs of old rheumatic or congenital valvular disease, but the presence of the super-added, chronic malignant endocarditis is sometimes not recognized by the doctors

who examine them. Slight or moderate enlargement of the spleen (septic, or due to embolic infarcts), is an important sign when present and should not lead to confusion or diagnosis of malaria. Likewise hematuria and albuminuria should always lead to careful examination of the heart.

AUGUSTUS K. DETWILER.

Omaha, Neb.

MORE ABOUT JAMAICA

The island of Jamaica, discovered by Columbus in 1494, lies 89 miles south of Cuba and 570 miles from the Isthmus of Panama. Its length is 45 miles and its average breadth 53 miles. In 1692, this island was visited by a tremendous earthquake, which sank a large portion of the city of Port Royal to the depth of 50 feet under the sea. The buildings, still standing as they had sunk, were visible in clear weather as late as 1835. (See American Cyclopaedia, vol. 9, p. 511.)

Jamaica is a most unique and picturesque country, in its physical aspects and climate as well as to its population. Since 1655 it has belonged to England. Slavery was abolished in 1833.

We may gain some idea of what the character of the present population may be, by glancing at the enumeration of the different classes in 1871. The total population then was 506,154. Of this number, 13,101 were whites, 101,346 were colored, and 391,707 were black; the latter mostly being liberated slaves and their descendants. It is an interesting fact that under such conditions education has ever been a matter of interest. It should be stated that thousands of coolies have been imported from Calcutta. The English, being rulers of the country, have made themselves conspicuous.

I have traveled and sojourned in five different countries, and in no place have I formed more enduring and pleasing associations than in Jamaica. I have made it an object to make only justifiable statements, based on my own observations, history, and folklore, giving each due weight. I know that, as a general thing, when a man arrives at the age of 40 years he is not inclined to correct his mistakes and is averse to admitting new facts. I have seen 84 years and claim to be an exception to that rule, and try to exercise due charity for those that are impulsive and blind to the truth from whatever cause.

This brings me to a review of criticisms, anent my statements regarding my visit to Jamaica, made by Dr. R. Heslop-Payne in this journal for August, page 727.

The Doctor claims to be a native of Jamaica and to have spent the first twenty-three years of his life there. In justice to him, I will have to make a few quotations from his unique article. He introduces his comments thus:

"Breathes there a man with soul so dead,
Who never to himself hath said,
This is my own, my native land?"

In proof of patriotism being a potent blinder to facts and justice, we have but to notice the unparalleled war now in progress in Europe. The Doctor is excused for having a warm side for his native land. After complimenting CLINICAL MEDICINE for publishing numerous facts from month to month, the Doctor goes on to say: "Now I know absolutely of one Munchausen story published in its columns. This bit of romancing is that portion of Dr. C. E. Witham's article on "My 6000-Mile Ocean Trip" (July, p. 615), referring to the island of Jamaica."

The doctor says I could not have written thus had I really visited that beautiful island. He says, "I must contradict his statements *seriatim*." He says, "The sunken city of Port Royal is not to be seen and has not been seen by any but the legend writers; and the good doctor even believes such rot as his ship being tied to a buoy which was anchored to a church-steeple."

Really, this is a most astounding assertion! I said nothing of the kind—I merely said that a buoy was anchored to the spire of a church. (See my article in July CLINIC, p. 617.) Now, I am willing to give the Doctor credit for misreading and not recollecting the truth. But the fact discredits his after-statements. The story is "rot," as the reader can see by reading the two articles.

As to the black woman in the street crying "Ginger-beer, ice-cold ginger-beer, 10 cents a drink, two drinks for a quarter"—her wholesale rate—and her refusing an American quarter and accepting a badly worn Spanish quarter, all I have to say is, it did occur. I was there.

I quoted from the published report of a missionary the statement that it was a rare thing for a native there to be able to tell who his father was. I infer that a missionary who had labored with the lower classes there would be the best judge and would state only facts. It is not expected of tropical countries to find the same degree of morality as in

colder countries. But the good Doctor tells us that "our white population there is far more moral than the average white population of America." In justification of this statement, he goes on to say: "Reminds me of the story the people here tell of the time when the old hotel in this town (Tripp, S. D.) burned down they found 48 dead babies in the privy vault and under the floor. . . . I have been practicing in South Dakota for years and know its state of morals fairly well."

Now, I fully agree with Doctor Heslop-Payne that "doctors, more than any other class, should be careful in print not to give unreliable data." Now, doctor, was not the story of the 48 babies mostly "rot"? I can not see how, being a native of Jamaica and having lived there twenty-three years, can alter the history of the country.

I write this to show that, in the opinion of my critic, "our white population there is far more moral than the average white population of America." And, further, to show that in the opinion of Doctor Heslop-Payne, the American Cyclopaedia makes a false statement on page 512, volume 9, where it says that the buildings of the Sunken City of Port Royal have been seen in clear weather—still standing as they had sunk.

C. E. WITHAM.

Lawrence, Kan.

[And now the discussion is declared closed! Let us "return to our muttons"—medicine.—Ed.]

"THE SADDEST AND MOST INTERESTING BRANCH OF MEDICINE" A COMMENT

I have read with much interest "Tragedies in a Sexologist's Practice," in the August number, page 686. This article is in that crisp, luminous style so characteristic of Dr. W. J. Robinson's writings. I quote the opening paragraph as a basis for dissenting comment.

"The practice of one specializing in venereal and sexual disorders is an interesting one. One hears peculiar stories, one acquires a unique insight into human nature, into the intricacies and aberrations of that powerful mainspring of human life—the sex instinct. Unexplored and uncharted depths of human psychology are opened up to you. It is the most interesting branch of medicine, but it is also the saddest one."

This paragraph illustrates one of the "unexplored and uncharted depths of human

psychology;" namely, the tendency to regard as exceptional that which is general.

Read this epigrammatic introductory paragraph carefully, and you will see that any experienced specialist in any department of medicine might honestly use it as an introduction to the history of an exceptional day in his practice, thinking he had been dealing with the "most interesting and saddest" part of medicine.

The second paragraph of the paper describes a feeling altogether common to experienced and conscientious physicians in every clinical department of medicine, especially general practitioners. It would, indeed, be hard to find in any American city a well-established general practitioner of ten or more years' experience who did not duplicate many times in the course of a year the cases enumerated. The somewhat exceptional thing in the Doctor's case is that he had so many in one day, and that, moreover, nine or ten months of it yielded a protracted Alpine holiday as a reward.

As for the sadness of tragedy, I submit the personal experience in a single day in the month of July. *Ten cases of hereditary syphilis following one after the other in hideous procession* The second commandment had suddenly become incarnate and taken my office for a dwelling-place. Distorted noses, blind eyes, suppurating ears, swollen necks, ulcerated throats, Hutchinson's teeth in fetid disarray! The decrepitude of senility and the ugliness of disease slowly extinguishing lives that have never known either the vigor of youth nor the beauty of health! And not a one of these sorry creatures had as yet reached their teens.

This grewsome train was followed by a woman in black, a widow of a week. Her husband had infected her with syphilis years before and had abandoned her. He had returned home repentant and tuberculous. This fiend repaid his wife's forgiveness and care-taking with inflicting upon her gonorrhea, which, as "whites," attracted no particular attention until after his death, when I was consulted by the family physician about a rapidly advancing inflammation of the widow's eyes. And that this pitiable woman was innocently ignorant of the cause of her woes and honestly mourned her widowhood is tragedy enough to make the hardest heart sick.

This exceptionally dull financial day closed with a case of exudative iritis in a young man who had become blind under the use of a certain advertised eyewash.

But enough of horrid details!

That day I left my office under the spell of that shadow which "man's inhumanity to man" so often casts athwart the doctor's pathway.

The tragedy of human life is deepened by the thought that the other fellow has no troubles.

C. V. ROMAN.

Nashville, Tenn.

CALCIUM SULPHIDE IN CONTAGIOUS DISEASES

I was very much pleased to read, in the July number of *CLINICAL MEDICINE*, an article upon the value of calcium sulphide as a prophylactic in smallpox and other infectious diseases. The signature, "H. C. Buck," carries me back to the days when Harry and I played together as boys in Old Kentuck'. However, the object of these lines is, to verify the accuracy of Doctor Buck's statements with regard to the uses of calcium sulphide as set forth.

A few years ago, we had in our city an epidemic of smallpox, and on that occasion I followed the advice of *THE CLINIC*, in every case giving calcium sulphide to saturation; and in every instance those patients already suffering from the disease had it in only a mild form, while those who had not yet come down with it generally remained immune. In some instances, persons who had slept in the same bed with those who had come down with smallpox escaped entirely, apparently as a result of saturation with calcium sulphide. Other persons not so treated did not escape.

This year, as a member of our local board of health, I have been administering calcium sulphide in an epidemic of scarlet-fever, and in every instance where it has been given as I have directed the disease has either been prevented or rendered so mild that the diagnosis has been a question.

I am so sure of the efficiency of calcium sulphide in diseases of this character that I should feel lost without it. I have felt better equipped and more confident of success in practice since I began prescribing it.

JOHN W. MORRIS.

Malden, Mo.

ECHINACEA IN ANTHRAX

I want to tell the members of the "family" about the cures we effected with echinacea in two cases of what we were sure was real anthrax. The first victim we were called

upon to treat died before anything could be done—in fact, he died shortly after I left the house. Two others, who were infected from the same source (diseased cattle) and were taken exactly the same way, very soon yielded to echinacea, in 5-drop doses given every hour. One was a wool-sorter, who had a sore on his head, very characteristic, with a very septic condition of the whole side of the head. The two improved immediately, and recovered.

ROSA W. PALMBORG.

Lieu-oo, China. (P. O., Shanghai.)

THE MOLOKAI LEPER SETTLEMENT

Armed with a permit from the Board of Health of the Territory of Hawaii, without which access is not permitted, I was landed, after severe buffeting by many waves in a crazy vessel, at the leper settlement on the Island of Molekai. My stay, because of the exigencies of commerce, had to be either too short or too long. I chose the former, which made my visit rather hurried.

The villages Kaulapapa and Kalawac, which comprise the settlement, are built on a peninsula thrown out into the sea from volcanic action and comprising about ten square miles. This is covered in a large part by volcanic rocks, though part of it is well suited for gardening and agriculture. The base of this peninsula is an abrupt cliff or range of mountains from two to four thousand feet high. It reminds one of the field of Marathon. "The mountains look down on Marathon, and Marathon on the sea." It is indeed a beautiful prison, but when the alternative was given me of a stop there of a part of a day or of a week I chose the former.

We arrived at Kaulapapa at daylight, were landed at 6 o'clock, and I was conducted to the residence of Dr. W. J. Goodhue, physician in charge.

To exemplify the influence of music in medicine, the band-stand, I observed, was placed in front of the Doctor's house. This house is a neat cottage, and it is surrounded by flowers and shrubbery and inclosed by a high paling fence with a double gate, one within the other, at a distance of about four feet. In front of the porch is a wide board over which one was obliged to climb. The Doctor was found in negligée, attending to his flowers. The broad board indicated the presence of little ones, who were soon in evidence. Asking about the double gate, I was told that, as the lepers sometimes came

and leaned on the outside gate, the inner gate was to keep the children from touching what the lepers had touched. Surely, a double devotion to bring up children in a leper settlement.

The Doctor had his automobile brought out and took me over to see Dr. Geo. W. McCoy, director of the United States Leprosy Investigation Station, and I was conducted through the establishment. The Government has given him a very valuable plant at the cost of about one hundred thousand dollars. It consists of laboratory and animal-house, a residence for his family and attendants, and a small hospital to keep patients in for treatment, experimentation, and observation.

The majority of the patients in this department have been treated with vaccines, that is, the killed or attenuated cultures of the leprosy bacillus, the remainder from the serum from the horse immunized against bacillus lepræ. The majority of the patients have expressed themselves as being improved under the treatment. In some there seemed to be an amelioration of the symptoms, but it proved only due to change of environment, hygiene, diet, and the mental effect. Acid-fast organisms have been found in two headlice taken from the head of a victim with nodular leprosy. The Doctor expressed regret that his work had not contributed any material advance to the therapy of leprosy or our knowledge of the transmission of the disease. They were unable to state positively that it was transmissible in man or beast by inoculation.

The resident physician finds chaulmoogra-oil the most popular remedy; wine or elixir of iron, quinine and strychnine, according to preference also are useful. That both are decidedly ameliorative is the most that can be claimed for the antitoxin emulsion and serum that have been used; but both have drawbacks. About 75 per cent of the inmates of the leper-settlement received special treatment for leprosy. Doctor Goodhue reports one very interesting case cured by surgery.

The church and grave of Father Damien, also of other priests who gave up their lives to the lepers, were shown me in the little churchyard; also the Protestant church, the church of the Mormons, and the Y. M. C. A. building. An athletic club and various forms of amusement and labor serve to while away the time. There is a visitors' house where relatives and friends may come and visit for a time, but they are not allowed to circulate among the patients.

The lepers are comfortable and happy, most of them more so than in their home surroundings; indeed, many who are so far relieved as to be permitted to leave the settlement prefer to stay. Children are born in the settlement in a healthy condition and after a time are sent to relatives or a home for lepers' children. The doctors and attendants certainly deserve credit for their devotion to such a hopeless work. The cases which I saw at Molekai were much more interesting than those seen in Palestine and India.

E. S. MCKEE.

Cincinnati, O.

ATROPINE IN HEMORRHAGE

A friend of ours, a physician, recently was operated upon, in one of the Chicago hospitals, for epithelioma of the tongue, a portion of this organ being removed. The day following operation, the wound began to bleed. The doctor, understanding the gravity of the situation, attracted the attention of an attendant. He could not speak, of course, but he was able to write. In this way he requested urgently and repeatedly that he be given atropine. The medical attendant was not familiar with the use of this alkaloid for arresting hemorrhage and demurred; however, eventually he acceded to the patient's demand. The atropine was administered, and the hemorrhage ceased at once.

This little experience—a very important experience to the doctor in question, inasmuch as he is sure that it saved his life—illustrates again what an extremely valuable remedy we possess in atropine. With reference to hemorrhage from almost any cause whatever, it exerts a powerful action possessed perhaps by no other remedy except emetine, whose action is not the same.

TWO INTERESTING CASES

One evening in August, 1913, I was called to attend a patient, about eight miles distant, amidst storm and rain. When I was half of the way, the rain came in torrents, and our horses became terrified by the peals of thunder, and, in the turmoil, I was separated from my groom-man, who carries my visiting-case and medicine. The latter, as I found afterward, found shelter in the nearby village. However, I myself reached the place, although without my medicine case.

The patient, a woman of 45, had been unconscious for the last six days; could not

swallow; had convulsive fits (not of a severe type), recovering every half hour and remaining free for about five minutes. There was no protrusion of the tongue, no froth. Her bowels had not moved since she became unconscious; her tongue was foul. She had had similar fits some twenty-five years ago, but then she did not remain unconscious for so many days.

I diagnosed it to be a case of hysteria—and no medicine-case with me! A medical store could be reached two miles off, crossing a river, but none volunteered to take the trouble in this dark and stormy night. Then I remembered that I had in my pocket the hypodermic-case in which was atropine, and I injected 1-100 of a grain of it at once. This brought a little sense into the woman, and she drew down her veil. After that, a second dose, of half the strength, stopped the fits. One-half hour after that, a third dose, by mouth, completely brought her to her senses and she began to talk, and also took some food. Next morning she was given a dose of calomel and jalap. She recovered.

N. CHATTERJEE.

Dt. Burdwan, India.

THE PRACTICAL APPLICATION OF LOCAL ANESTHESIA

In discussing the application of local anesthesia, it is not the desire of the writer to announce a new discovery, but to present the findings of actual experience in its practical application. The common impression is that it is useful only in minor operations, and that it has no part in general major surgery. This impression is unjust and has a tendency to relegate the method to the background. Local anesthesia has a field of usefulness both in minor and major surgery; but it must be mastered before it can be appreciated.

There are two absolute essentials that must be mastered, namely: (1) perfect knowledge of the anatomy of the field of operation; (2) mastery of the technic of obtunding the sensibility, and of the essentials of the operative technic.

The selection of subjects is very important, as it is only natural that a neurotic, high-strung patient is not a desirable one to undergo an operation with his full senses. We have a most valuable aid in this work in H-M-C given in sufficient dosage "to effect," and it is always better to administer a dose at least an hour before the operation, and repeating it if necessary.

The drugs used as local anesthetics are well

known and have been employed extensively at different times. Cocaine has been the "old standby" for many years; still, it has some disadvantages that can be avoided by having recourse to one of the newer drugs now at our command. Cocaine is toxic; it can not be boiled, hence, it is not perfectly sterile; it decomposes both in solution and in the dry state, if kept too long. The writer has administered cocaine many times without getting the slightest ill effect in any form; nevertheless he has discarded it entirely for a much more reliable and safer drug for this purpose.

Quinine and urea hydrochloride is of the newer drugs of late extolled as having great virtue as a local anesthetic; however, it is slow in producing this effect, while it causes an induration at the site of the infiltration that is slow to disappear; moreover, if used too strong, it will produce necrosis both in superficial and deep structures. Hence, I give it as a warning that it should never be injected into dense structures or the periosteum. When it is used, it should be in solution, of a strength ranging from 0.25 to 1 percent. Also, great care must be exercised that the tissues be not infiltrated too much. After complete infiltration the operator must wait at least five or ten minutes before operating. The anesthesia produced is quite enduring, lasting from an hour to as long as several days.

Alypin is very rapid in its action, and is perfectly safe in small amounts. Toxic effects have been reported; but, if used in less than 2 percent strength, it will not give rise to any inconvenience.

Novocain is a late addition to this group and so far has been found almost ideal, and it fulfils every want. The combination of novocain and suprarenin (synthetic) can be obtained in very convenient tablet form. The tablet is dissolved in normal salt solution and boiled, which sterilizes the solution perfectly, thus preventing bacterial contamination. The "tablet A" contains 0.125 Gram of novocain and 0.000125 Gram of suprarenin (synthetic). One, two or four tablets dissolved in 25 Cc. of salt solution will give a 1-2, 1- or 2-percent solution. A 1-2-percent solution is strong enough for the average operation. In a general way, it is unnecessary to consider the dosage of novocain, unless an unusual and absurdly large quantity is used. We know that even normal salt solution is toxic when used to excess.

A convenient manner of boiling the anesthetic solution is, to dissolve the tablets in

the required amount of salt solution in a test tube, then ignite a formin 5-grain tablet, which makes a very convenient "alcohol-lamp." It does not take up much room and never spills.

Local anesthesia is accomplished by one of three methods: (1) infiltration; (2) intravenous injection; (3) nerve blocking.

1. Infiltration is the method most commonly in use and in the average condition is entirely satisfactory. The procedure is quite simple. To the part, whenever possible, a tourniquet should be applied; but this is not an absolute essential, as the suprarenin will take care of the capillary bleeding. The surface is cleansed with a benzin solution of iodine, 1:1000, then stained with a 3.5-percent tincture of iodine. Having all in readiness and absolutely aseptic for the infiltration, fill an ordinary hypodermic syringe with the solution. Now pinch up a fold of the skin and insert the needle quite superficially and almost parallel with the skin. A white wheal rises. Always inject the solution very slowly. For the next syringe-full the needle is inserted right into the wheal, but not so near the surface of the skin. As the needle is being advanced the solution is slowly injected.

It is always necessary to keep each new insertion of the needle within the already anesthetized zone, thereby obviating pain. When the length of the proposed incision is reached, then the deeper structures must be injected, until a sufficient area is prepared. The superficial infiltration blocks the tactile and sensory nerve-filaments, and later the deeper nerves are blocked completely, thus eliminating the painful sensations caused by working in live tissues. If in the course of the operation an area is reached that does not show a sufficient anesthesia, the operator must stop work immediately and infiltrate this area. In all cases, it is essential to avoid pain; for pain tends to make the patient uneasy and to lose confidence in the method, even though the operation is nearly finished and the worst possible part of the traumatism is over. Patients will recall the painful part of the operation more than anything else. If the operator can keep the patient ignorant of the different stages of the work, he will encounter little difficulty.

The important points of the operative technic are these: An absolute knowledge and certainty of the anatomy of the area; the operation must be done as gently as possible—clean dissection is attended with better and more satisfactory results; using sharp instru-

ments, cutting either with knife or small "nips" with the Mayo dissecting-scissors; pulling and dragging upon the tissues to be strictly avoided.

Should the patient show signs of syncope, it is better to lower his head; by so doing, the blood gravitates back to the temporarily anemic brain.

The range of usefulness of the local method of inducing painlessness is quite extensive; but, of course, it is best suited to superficial operations.

The following types of operations have been done by the writer under novocain infiltration: Herniotomies (one patient, a man of 84 years—strangulated hernia, with stercoreous vomiting—made complete recovery); appendectomies; excision of prepatellar bursa; tumors; hydroceles; lymphadenitis (cervical); vericocoele; amputations (digits); circumcisions; excision of ganglia; bunions; empyema; ingrown toe-nails; tenotomies and tenorrhaphies; hemorrhoids; ectomies; excision of sebaceous cysts and dermoids (of skin). Many others might be added.

In abdominal work in which it is necessary to handle the peritoneum we encounter some difficulty. The parietal peritoneum is sensitive to manipulation and traction; but this can be overcome by direct application of the solution. The intestines can be handled quite freely without causing pain, but if traction is exerted upon the mesentery it produces marked discomfort of a cramplike nature.

Herniotomies are quite easily done and afford great satisfaction. In a small hernia, the sac is easily found by its color, and if it is pinched with the forceps the patient complains only for a moment. To obtain the most satisfactory results, all these operations must be done slowly. These patients suffer far less postoperative pain—usually a heavy, throbbing pain. Vomiting is absent, and they are able to drink water and eat light food.

2. Intravenous anesthesia is more limited in its application, as it can be used to the best advantage only in the extremities. The operator places a bandage above the knee, allows the veins to fill, then tightens up. A vein is isolated, the blood is withdrawn, and then the vein is filled with the anesthetizing solution. Bier has reported very extensively upon this method. The technic must be perfect, as the method is attended with some danger.

3. Conductive anesthesia, or nerve blocking, is beginning to grow in favor, especially

in the dental profession, for it is there that it has a wide scope of usefulness. Novocain (in 2-percent solution) is injected into the nerve at some point above the field of operation. In operations on the lower extremity, the anterior crural and great sciatic nerves are injected, thus obtunding the sensibility in the entire leg.

The brachial plexus has been infiltrated for operations in the forearm.

The lower jaw is attacked by infiltrating the inferior dental nerve just where it enters the inferior dental foramen on the inner side of the lower jaw. This will anesthetize half the lower jaw, and teeth may be extracted, root-canals cleaned out and filled, as well as other operations performed as they arise.

Conclusions:

1. The local use of novocain is to be preferred, because of its safety (being non-toxic) and that it can be boiled.

2. Local anesthesia is a fertile field needing more cultivation.

3. It has a great field in office practice.

CHARLES W. DELANEY.

Altoona, Pa.

AN ELECTRICAL CHARGE FROM THE DYING. WHO WILL COMMENT?

I wish to ask you a question. Have you ever known of a dying person in whom an electrical current was engendered in the arm or any part of the body and which would give an electric shock to a well person touching him?

In the month of April I attended a woman nearly 80 years old, who was of a remarkably strong constitution, and the mother of thirteen children, eight of whom are living. I could not discover evidence of any disease: she had no pain, no fever, no discharges of abnormal character; bowels and kidneys were acting regularly; heart was strong, regular, beating 75 per minute; respiration was regular; mind was clear and memory good. The only thing she complained of was a smarting of the vagina after urinating, which I found to result from a slight scalding from the urine; and this yielded at once to washing and applications of zinc ointment.

However, in the night of April 25 the woman became unconscious and died at 4 o'clock next morning. Now comes the odd thing. An hour or two before she died, two of her sons were sitting beside her, one on each side of the bed, feeling her pulse, when the older one felt in his hand and arm a strange sensation, and he had to let go and

apply cold water, to get relief. Soon after that the younger man placed his finger on his mother's pulse, whereupon he got a distinct shock, he declares, just as he has had by taking a hold of a small battery. Then a sister also felt it, as did two neighbor women present. All experienced the same feeling, and all describe it as exactly like that produced by a small battery. They would have sent for me to examine the patient, but she died soon after the shocks were felt.

I have never met with such a phenomenon before. Have any of you? I write this, hoping you may have some information on a similar case. To me it is a most unique occurrence. The people are intelligent and were not unduly excited. If only one had felt the shock, I should not have given it any attention, but supposed it was a nervous condition in the subject, brought on by the want of rest or by grief. But some of them were cool-headed neighbors, who were not excited. And all of them—five in all—give the same testimony. Now, this is a nut too strong for me to crack. Maybe some of you editors can extract the kernel.

THOMAS W. MUSGROVE.

Sultan, Wash.

[Suggestion? Looks like it—but has anyone a better hypothesis?—ED.]

THAT OUNCE OF PREVENTION: SOCIALIZING THE MEDICAL PROFESSION

It does a doctor a world of good to know that his diagnosis and treatment have been confirmed by competent counsel; it gives him increased confidence in himself and his methods; it nerves him for the further prosecution of his work. The greatest good in this world that can come to us is the knowledge that we are right and that we are helping along the evolution of a higher civilization.

These thoughts are suggested by the many favorable comments received on my articles that appeared in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, entitled "Economic Environment (April, 1913), "Health Hints" (October, 1912), and "The Genesis of Crime (July, 1912), besides the other ones. Moreover, my studies along the lines alluded to in those articles since they were written fully confirm the position then taken.

Economic evolution certainly is forcing our profession to adjust itself to our rapidly changing industrial environment. That we must do this or fall out, disgraced and dis-

credited, or linger on as laggards, is becoming more certain every day.

What an unpardonable folly to treat symptoms alone, without ever seeking out the causes.

Take this example. Most of my clientele live in the great packery district of Fort Worth, Texas. Here the two large companies employ from 2500 to 4000 men and women. The wages they pay run from \$4 to \$20 a week. A fair average wage for those who do the real work would be perhaps about \$6 or \$7. These companies clear approximately \$1600 a year on each worker. Now, how can any man support an average family of five on one dollar a day at the present cost of living?

It is useless to talk about saving anything for old age, securing a home (hardly one in thirty owns one), educating the children, taking a vacation or enjoying any of the advantages of our civilization. Really, these wage-slaves are in a worse condition than were the chattel slaves before the Civil War. Then masters were hunting slaves; now slaves are hunting masters. Then it paid the master to care well for his chattels. Now they do not get as much attention as do government mules. It reminds one of the lines put into the mouth of such a plantation-slave:

My massa had a working man,
He also had a mule,
To save my life I couldn't tell
Which was the biggest fool.

He fed the man on liver,
He fed the mule on hay,
He cussed the man and kicked the mule,
And worked them every day.

More than 900 of our packing-house people have recently been "let out"; nevertheless, through the speeding-up process, installing of improved machinery, forcing the help to violate the law by working on Sunday, fake insurance, cutting wages, and other methods so well known to our capitalistic feudalism, as much as ever is being produced for the masters. Still, hundreds always are at the gates, seeking jobs.

And the doctor—where does he come in? Of course, he comes out at the little end of the horn. If I succeed in collecting one dollar out of five booked, I am doing well; at that, using the alkaloidal remedies mostly, I furnish them my own medicines free. These people will not call until the last hope of relief from home treatment or patent medicines has vanished. Consequently, the doctor, as well as the patient himself, stands at a great disadvantage.

Meantime the millionaire owners are having a good time at northern health-resorts or in Europe, living in luxury, "clad in purple and fine linen, faring sumptuously every day," spending lavishly the money they did not earn and do not need. In this country, in 1912, certain packeries reaped a net profit of \$72,000,000 for less than 200 stockholders [This statement we question.—Ed.] The workers everywhere earn and need the money that they do not get. Their children must sicken and die for want of the bare necessities of life. In two families where I was called recently, the wives being sick, the husbands lost their jobs because they remained at home to wait on their helpmates. Wherever all these jobless go to look for work they find similar conditions. Harvest fields are overcrowded, and, besides, it costs more than the men can save up to get to the work.

Now, my studies lead me to believe that this is no overdrawn concrete illustration of the abnormal—yes, beastly—economic conditions all over our country. There are, of course, endless variations. But the astounding facts stated in my articles above referred to are abundantly proven; and the conditions set forth are now so accentuated that in several states like Colorado, Michigan, West Virginia, California, and so on, violence and bloodshed are resorted to. A starving man knows no law.

About one hundred families—mark: 100 families—now own half of all the enormous wealth in this country, and this handful of individuals largely controls what we call the West. These same persons control the old parties, as also to a very large extent the churches, schools, newspapers, magazines, and other means of intelligence. Read "The Story of the Month" by Lincoln Steffens in May *McClure's*. About 19,000,000 persons—or three-fourths of our wage-earning population—have an annual income of only \$480, when it takes \$1000 a year to maintain a family in physical efficiency. To live comfortably, own a home and give the family a good education, costs from \$3000 to \$5000 a year. Less than one in 200 families in our country get this.

Just here is my answer to the editor's objections to my remedy, as presented in the issue for April, 1913, page 345. The editor thinks that, in advocating government ownership of all capital used for purposes of exploitation, I am not "in line with evolutionary law." "Progress comes as a result of struggle," he says.

This is very true, when "struggle" refers to man's contest with the forces of nature below him and with many of the lower forms of life; but not true when man struggles with his brother man on the economic plan for a living. Here, as Ruskin well says, "cooperation is everywhere the law of life and competition the law of death." The noted sociologist Lester F. Ward also proves, by a wealth of facts, in his "Applied Sociology" that "over fifty times more talented people, such as have led the world's civilization, have sprung from families that did not have to struggle" as strenuously as do our families that are now engaged in industrial warfare.

Now, my remedy would remove the struggle from the economic to the higher plans of action, would force the privileged parasites, who know "neither toil nor spin," to work at least enough to produce a healthy body and mind, and to enable those millions upon millions, who are now nothing but beasts of burden, to cultivate and develop their minds. Our capitalistic monopolies necessitate class conflicts, forcing all classes far beyond the health-zone. Hence, disease and all abnormal conditions are increasing from two to five times faster than our population.

In my "Health Hints," I was the first, so far as known, to advocate a four-hour work-day—that is, for physical labor—as most conducive to our symmetrical healthy development at this stage of our evolution. And now comes Dr. C. B. Steinmetz, our country's leading electrical scientist, and says that "the day's work should be reduced to four hours." The Doctor is the president of The World General Electric Company of New York. He declares that this could easily be accomplished by "a rational organization of society" such as socialism proposes. He is a red-card outspoken Socialist, of course.

Our economic philosophers have figured it out that with such an organization conserving the ocean of energy that now goes to waste every worker would get \$2000 a year for a six-hour day, and more later on, as better machinery was installed. Think of the time this would give for rest, recreation, and improvement in a thousand ways. I should like to have the erudite editors of our AMERICAN JOURNAL OF CLINICAL MEDICINE tell us how this would produce "a race of weaklings."

Dr. Alfred Russell Wallace, codiscoverer, with Darwin, of the law of selection, a most eminent scientist surveying the present condition of society, in his late work titled "Social

Environment and Moral Progress," writes: "Our whole system of society is rotten from top to bottom and the social environment is the worst the world has ever seen." (See p. 169.) Alarmingly true; and, hence, Dr. E. Divine says: "These hardships are economical, social, transitional, measureable, manageable. Misery, as we say of tuberculosis, is communicable, curable, and preventable. It lies not in the unalterable nature of things, but in our particular human institutions, our social arrangements, our tenements and streets and subways, our laws and courts and jails, our religion, our education, our philanthropy, our politics, our industry, and our business."

Such is a meagre epitome of the causes that have been involuted in our social structure, the results of which we now behold in the evolution of the barbarisms that portend such conditions as we shall see in Mexico soon unless averted by more enlightened measures. Certainly, the exploitation of the laboring class out of five-tenths to nine-tenths of all it produces is the blackest crime of all the ages. It must go peaceably, I say; but forcibly if the exploiters so elect. Wage-slavery can no more continue than could chattel slavery fifty years ago.

I can see no other legitimate remedy but government ownership and management of all the great natural monopolies. Then only will society's purchasing power equal its productive power. Everyone will control his job and get just what he produces, or its equivalent; and with this he will be free to purchase private property to his liking.

It is easy to see how the laborer could earn from five to ten times what the average working-man gets now. A good home free from debt, with the best educational advantages, would be within the reach of all. This would insure health, happiness, and a progressive civilization, without the barbarous bloody cataclysms of war, such as we have seen in the past [and is in progress as this goes to the printer.—ED.].

The physician, as Professor Voght shows in *The Popular Science Monthly*, will be employed by the state, the same as our teachers, policemen, and so on. It will be the doctor's business in his daily rounds to teach the people the avoidable causes of disease. How much more reasonable will not his ounce of prevention be than is the pound of cure he now dispenses. How much better to nip the evil in the bud.

Under the present system, he is prosperous in inverse ratio to the health of the community. Since he receives his reward from

the curative side of his practice, he cannot be professionally interested in the prevention of disease. This is just the opposite of what it should be. Under socialism, the doctor will be most interested in the prevention of disease, and the greater his success in this, the less would be his labor of curing.

Our free dispensaries are unfair, in that they place a stigma on the poor, and thus destroy their manhood. The great number now too proud to patronize a dispensary and too poor to call a physician would receive timely treatment under the plan proposed. What an indictment of our so-called civilization (which in reality is galvanized barbarism) it is that three-fourths of our 20,000,000 school-children are diseased and their parents are too poor to provide timely treatment. My plan would help them all alike, and at once. Private practice, as the private schools of today, could be continued at the option of any who wished; but the elimination of the causes of disease would be the chief duty of the physician.

Is it not as necessary to develop a healthy body as well as a healthy mind? Every farmer knows that good conditions are a prerequisite for good crops and healthy stock. The same is true of the human species, as Burbank has abundantly shown. Even the American Medical Association, at its last session, began to wake up to this fact. Many organizations of various kinds now employ a company-doctor.

The socialization of our profession, already begun, should be so extended as to include all the people. Even our own self-interest demands this. But, far beyond this, all our nobler instincts cry out for it. The trend of our humanitarianism is all in that direction. May God in us energize us to help speed the day.

S. J. BROWNSON.

Fort Worth, Tex.

[The poverty, inequality, and injustice, of which Doctor Brownson draws such a vivid picture, makes our hearts bleed; but, it does not follow that the remedy that he suggests—socialism—will prove the cure-all for all our troubles, or that society will go on, in the even tenor of its way, grappling with the world's industrial problems and conquering the forces of nature when the machinery of production is turned over to the proletariat to run in its own sweet way on a four-hour-a-day plan.

The impression seems to prevail very widely among the poor that our captains of industry

"toil not, neither do they spin." How foolish—how untrue! It is because they work harder than other men, and put into their efforts a degree of energy, determination, and intelligence that the book-reformer has no conception of whatever that they *are* captains of industry. It is the intelligent creative labor of these very men which has organized and built up the great industries of the nation, and which gives work at living wages to millions of men, who have neither the intelligence or initiative to create anything for themselves or others. On the other hand, the men who are very poor, in nine cases out of ten owe their debased position in society either to their lack of intelligence or to their lack of effort.

It may be that when the men of great creative power are reduced to the level of the mass, they will find new channels for their energies—but we have no assurance that this will be so. Socialism has never been tried; it is still a theory—though a beautiful theory.

We repeat, that it is our conviction that its inevitable tendency is to pull down the men of power and to raise up the feeble and the commonplace. The strength of a nation depends upon the intellectual strength of its men of action, who must somehow possess the right to *compel* the weaklings to do the necessary work. The airy promises of incomes of \$2000 a year, for four hours a day of labor, are but bait to catch the foolish, and will hardly mislead many thoughtful men.

After all, it seems to the writer that what we need is not a tearing up of society by the roots, but rather a readjustment to new conditions, with such changes that there may be the largest possible equality of opportunity, a minimum of special privilege, and abundant stimulus to intelligence and industry. This readjustment is actually going on at the present time, and as rapidly as conditions warrant. However, the world is to go ahead, and *brain must rule, not mere brawn*. The proletariat state would be a rotten and dying one, in our humble opinion.—Ed.]

TAKING COLD

On page 118 of February CLINICAL MEDICINE, you say: "We shall have to revise our old views about catching cold. (1) Here we have been stopping in a summer cottage, a little snow outside, with temperature falling at night below freezing; cottage very open, no heater except an oil-stove; (2) yet, we have had no colds. (3) In the city, going on the cars to the office, sitting in a warm house, we have

never a day without sneezing, and sometimes it develops into a cold. (4) Here we work hard, cutting, chopping, sawing, brushing, but have no colds. Evidently it is not cold that causes colds. Then what is it? Germs."

Now let's investigate this theory of the doctor's and see where we are at!

About thirteen years ago, when I was attending medical college, the faculty thought it wise to have a then somewhat renowned professor from some eastern city hold a public lecture, before us students, and to which lawyers, ministers and whoever would be interested were to be invited, on the prevention of disease.

Among other things new and astonishing, the professor expounded the extraordinary discovery that the phrase to "catch, or to take, cold" was a misnomer. However, he volunteered no substitute that would more clearly express what we meant. We dropped the new idea, that he so eloquently portrayed before us, for want of a more appropriate or suitable name for that condition; and until now—it seems we are still waiting for a better name for that pathologic condition.

Now let us look into the cause of taking, or catching, a cold, taking up point for point.

1. You, my friend of THE CLINIC, have not been, or were not, sitting around and reading, allowing your body to go almost into a slumber and inactivity, as you would in the house or in your office, or even in the street car; but, on the contrary, you went out there in the open to enjoy activity, putting on proper clothing to fit the occasion, kept yourself active and on the alert for as much comfort as you could obtain, and did not allow yourself to perspire, so that your underclothing was dry and not heavy with sweat, and did get warm and sweating. You were very careful not to sit or stand idly in a draft, but kept yourself active until your clothing became dry, and, in addition, if you did find that you must keep quiet for a while, you put on your overcoat, to keep the cool wind (air) from those wet clothes. Otherwise, you will agree with me, that you would have "caught a cold" just as you would have done under similar circumstances in any other place.

Can you not recall your mind to such experiences in your practice? I can; and not only so, but personal experiences, many of them.

2. Why you have no colds is not because of the open cottage, no fire and no germs, but because you were fortified by a normal health (resistive power), by active work, plenty of clothing, dry and warm, no draught, and by

being careful not to allow yourself to sit still reading, writing, etc., through which your circulation, at least in part, would become inactive.

3. This has already been answered by the foregoing, when it is considered that the passenger in the street-car came into the car in a warm and sweating condition, sitting still, with the front door or overhead windows open, causing a draught on your feet, back, etc.

The same may be said as to when in your office, reading or writing, with hardly enough heat to keep one from chilling, or else sweltering hot, then opening door or window to cause a draught while sitting quiet.

The adult is not much different in this respect from the child. No matter how healthy the babe is, if the nurse who washes its head and allows it to be uncovered while bathing the body—hence, without protection from wind or draught—it will at once begin to sneeze—the baby has caught cold. When the babe is covered too warm and turned over without wiping the then turned-up side of the head, it may begin to sneeze, and, if there should happen to be a cool draught over it, develop earache, or "neuralgia." If the nurse is slow in changing the babe, having brought it out of its warm bed, exposing it to the cold air of the house, its feet getting cold, there may follow indigestion and colic, because the child has "caught" a cold.

4. Again, you take no cold because of your activity, you work in your shirt-sleeves, hardly get warm, but, when you do, you are very careful not to allow yourself to stand or sit in the wind without drawing on your jacket or coat, lest you "take cold." This is common sense that even the woodchopper has learned many centuries ago—and no scientific theories have been able to disprove it.

Internally, cold drinks congeal the mucus and increase the quantity of it, and all the rest of it.

It may be well enough to explain how a chill or cold congests the tissues or the fluids in the tissues and so produce an inflammation in which the various germs cause heat and swelling, but it still remains true that the primary cause was a cold or chill, and, through that, gave rise to the infection; this being developed within the tissues, and not from the surroundings, such as impure or insufficient air, and so on.

However, the inactivity of the man, the want of exercise, lack of ventilation and pure air undoubtedly reduce the resistive power to

cold and atmospheric changes, and thus one becomes more susceptible to the ravages of the elements and to infections of all sorts.

To sum up the question. To me, it is plain that these congestions are due to, and are the result of, sudden changes of temperature in an unprotected part or a chilliness of the whole body, and does not depend so much on location and environment of atmosphere as upon the resistive power of the individual, and the peculiar neglect or care as to exposure, the avoidance of overheating or chilling, and the consequent contraction of colds.

R. WILLMAN.

St. Joseph, Mo.

[I heard Captain Amundsen, in his lecture upon the discovery of the South Pole, declare that there were no "colds" among the members of his crew—but of exposure there was no lack. Other explorers in arctic regions report similar experiences. If we can get away from "the crowded haunts of civilization" infectious diseases of all kinds are rare—if we except those transmitted by the bites of insects or carried by travelers. There are several factors in "taking cold," all important. One is of natural susceptibility; another is temporary loss of resistance, due to exposure and disturbance of vascular equilibrium; while a third is—"germs"!—ED.]

A CHEAP AND UNIQUE SURGEON'S KNIFE

For the last two years I have been using as an operating knife a Durham Duplex Demonstrator razor, costing 35 cents. This



Fig. 1.

is modified for surgical purposes as follows: First I remove the handle, of which I file off one side and an end, as shown in the photograph. (See Fig. 1.) This gives me a knife which can be used on one side for shaving the hair, and on the other side for operative purposes. (See Fig. 2.)

I like this much better than the expensive surgeon's knives procurable from the instrument houses. I can always have it sharp whenever I want it. I find it better to employ blades that have been used for shav-

ing until they have become dull for that purpose, since the new blades seem too sharp for surgical work.

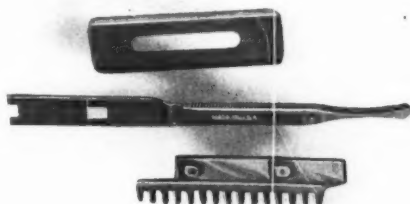


Fig. 2.

I hope that other physicians will try this unique contrivance and let me know how they like it.

CHARLES W. LARRABEE.

Helen, Ga.

BABY CONTESTS—WHAT IS EXPECTED OF THE "JUDGE"

Recently we received an inquiry from one of our subscribers as to what he would be expected to do in a prize-baby contest. He knew that there were rules governing the judging of the youngsters, but what those rules were he did not know, and so he came to us for help. Through the kindness of Dr. Effa V. Davis, of Chicago, we learned that we could secure the necessary "score cards" from Dr. Margaret V. Clark, of Waterloo, Iowa. We accordingly wrote to Dr. Clark, who sent us a copy of the blank to be filled out.

Inasmuch as there are readers of CLINICAL MEDICINE who may be called upon to act as judges in baby contests, we reproduce herewith the official score card handed us by Dr. Clark. Copies of this card can be secured by addressing Mrs. Mary T. Watts, Audobon, Iowa, who is president of The American Baby Health Contest Association, or from Dr. Clark, at the address given. It is copy-righted.

DUPLICATE OFFICIAL SCORE CARD

AMERICAN BABY HEALTH CONTEST ASSOCIATION

Contest held by.....
Place of Examination..... Date 191..
Name of Child.....
Age, Years..... Months..... Days.....
Sex, Boy..... Girl.....
Blonde..... Brunette..... Medium.....
Weight at Birth..... Strong at Birth?.....
Order of Birth.....
(1st, 2nd or 3rd Child.)

Breast fed.....Regularly?.....Months.....
 What kind of Artificial Food?.....
 Regularly?.....Months.....
 Is child now given sweets and other food between meals?.....
 Has child slept habitually in the open air or with open windows in the day time?.....
 and at night?.....
 Father's Name.....
 Age.....Years.....
 Address.....
 Occupation.....Education.....
 Nationality of Father.....
 Paternal Grandparents.....
 If American, nationality of child's paternal grandparents.....
 Does Father use Beer.....Wine.....
 or other Alcoholic Drinks?.....
 Mother's Age.....Years.....Education.....
 Occupation before marriage.....
 After.....
 Nationality.....
 Maternal Grandparents.....
 If American, nationality of child's maternal grandparents.....
 Parents live in City, Town, of.....inhabitants in the country.....

The Scoring is arranged for children between the ages of twelve and thirty-six months, only.

PSYCHOLOGICAL	PERFECT	
	SCORE	SCORE
1. Facial and ocular expression.....	10	.....
2. Intelligence.....	6	.....
3. Tractability.....	5	.....
4. Attention.....	3	.....
5. Imitation.....	4	.....
6. Disposition.....	5	.....

HEAD

7. Length of head.....inches	5	.....
Width.....inches		
Circumference.....inches		
Front of head.....inches		
8. Symmetry of head, including shape and size of forehead, occiput, temporal and parietal regions.....	8	.....
9. Pupillary distance.....inches	4	.....
Shape of eyes.....		
10. Shape, size and position of ears.....	3	.....
11. Shape and size of lips.....	3	.....
12. Shape and patency of nose.....	3	.....
13. Shape and condition of jaw, hard palate, tonsils.....	3	.....
14. Number.....shape, size and condition of teeth.....	4	.....

GENERAL EXAMINATION

15. Height.....inches	5	.....
16. Weight.....pounds	5	.....
17. Circumference of chest.....in.	5	.....
18. Circumference of abdomen.....in.	2	.....
19. Symmetry.....	4	.....
20. Quality of skin and fat.....	4	.....
21. Quality of muscles—hand grasp, rising, sitting, poise, walking, running.....	4	.....
22. Bones of skull, spine, chest, limbs and feet.....	5	.....

100

Cephalic Index.....

TABLE OF AVERAGE HEIGHTS, WEIGHTS AND MEASUREMENTS.
 USE ALSO TO DISCOVER FAULTS OF SYMMETRY.

(See No. 19.)

AGES IN MONTHS	HGT.	WGT.	CHEST MEAS.	ABDO. MEAS.	HEAD MEAS. CIR.
12 to 13 mo. inc.....	30.80	23.30	18.10	17.80	18.20
14 to 15 mo. inc.....	31.66	23.35	18.34	18.00	18.45
16 to 17 mo. inc.....	32.24	24.40	18.58	18.20	18.70
18 to 19 mo. inc.....	32.82	25.45	18.82	18.40	18.95
20 to 21 mo. inc.....	33.40	26.50	19.06	18.60	19.20
22 to 23 mo. inc.....	33.98	27.55	19.30	18.80	19.30
24 to 25 mo. inc.....	34.56	28.60	19.54	19.00	19.38
26 to 27 mo. inc.....	35.14	29.65	19.78	19.20	19.46
28 to 29 mo. inc.....	35.72	30.70	20.02	19.40	19.50
30 to 31 mo. inc.....	36.30	31.75	20.26	19.60	19.60
32 to 33 mo. inc.....	36.88	32.80	20.50	19.80	19.70
34 to 35 mo. inc.....	37.38	33.85	20.74	20.00	19.78

Teeth—Central incisors appear about the 7th mo.; lateral incisors from 8th to 10th; anterior molars 12th to 18th; eye and stomach 14th to 20th; posterior molars, 18th to 36th.

Multiply width of head by one hundred and divide by length to get cephalic index. When index is seventy-five or less the child is dolicocephalic or long-headed; seventy-five to eighty, mesocephalic; eighty to eighty-five, brachycephalic.

The anterior fontanelle should not be bulging, rather slightly depressed. It should be completely closed between the fifteenth and twentieth month.

The bony skeleton should be especially examined for rickets.

The child should first attempt to sit at about the 16th week, be fairly successful about the 40th week, and firmly seated at the 10th or 11th month.

He should attempt to stand about the 38th week, and be successful at the 11th or 12th month. He should walk unsupported at the 14th or 15th month—certainly not later than the 18th month. Precocity in walking is not desirable.

The skin should be pink, flesh firm and lips red, breath sweet, tongue clean. He should breathe through the nose only and should not be fretful. He should not be restlessly active, nor disinclined to play.

"INCLUDING FINNIGAN"

Of course everybody knows Gillilan's poem reciting the succinct but expressive report of Section Boss Finnigin to Superintendent Flannigan—"Off agin, on agin, gone agin—Finnigin." We are happy to see that "Finnigin" has at last been immortalized by the publication of this poem with others in book form. Gillilan writes some mighty good stuff. He is not a Tennyson, nor a Byron, nor an Alfred Noyes or even a William Watson—thank God! But he does know how to touch the hearts, arouse the risibilities and strengthen the courage of good plain Americans. For instance, the following:

Courage, brothers; while a clamor from the busy world may rise
 Filling all the songless spaces 'neath the overarching skies,
 While we feel our little murmur may be heard by none but us,
 Sing—sing on, though hearts may falter, it is besn we labor thus.
 Someone—here, or there, or yonder—hears to sound amid it all

But the cadence of our carols as they bravely rise
and fall.
And the very hope it yearns for to some weary soul
you bring
While you fear nobody listens to the little songs you
sing.

Those who know and love children and try
to understand them will appreciate the
following:

I'm not a-scared o' horses ner street cars ner any-
fing,
Ner automobiles ner th' cabs; an' once, away last
spring,
A grea' big hook an' ladder fing went alspity bangin'
by
An' I was purtnear in th' way, an' didn't even cry;
'Cause when I'm down town I go 'round wif papa—
un'erstand,
An' I'm not 'fraid o' nuffin' when my papa holds
my hand. * * * *

Sometimes my papa holds on like I maybe helped
him, too
An' makes me feel most awful good puttendin' like
I do.
An' papa says—w'y papa says—w'y somepin like
'at we
An' God 'ist keep a holdin' hands the same as him
an' me.
He says some uvver fings 'at 'I ist partly un'erstand,
But I know this—I'm not afraid when papa holds
my hand.

Even doctors can laugh over Gillilan's
poem on "Modern Medicine:"

I went to a modern doctor to learn what is was
was wrong.
I'd lately been off my fodder, and life was no more
a song.
He felt of my pulse as they all do, he gazed at my
oustretched tongue;
He took off my coat and weskit and harked at each
wheezing lung.
He fed me a small glass penstalk with figures upon
the side,
And this was his final verdict when all of my marks
he'd spied:

"Do you eat fried eggs? Then quit it,
You don't? Then hurry and eat 'em,
Along with some hay that was cut in May—
There are no other foods to beat 'em.
Do you walk? Then stop instant—
For exercise will not do
For people with whom it doesn't agree—
And this is the rule for you:
Just quit whatever you do do
And begin whatever you don't;
For what you don't do may agree with you
As whatever you do do don't."

"Yes," thus saith the modern doctor, "tradition be
double durned!
What the oldsters knew was nothing compared to
the things we've learned.
There's nothing in this or that thing that's certain
in every case
Any more than a single bonnet's becoming to every
face.
It's all in the diagnosis that tells us the patient's
fix—
The modern who knows his business is up to a host
of tricks."

"Do you eat roast pork? Then stop it,
You don't? Then get after it quickly.
For the long-eared ass gives the laugh to grass
And delights in the weed that's prickly.
Do you sleep with the windows open?
Then batten them good and tight
And swallow the same old fetid air
Through all of the snoozesome night.
Just quit whatever you do do
And do whatever you don't;
For what you don't do may agree with you
As whatever you do do don't."

I should not wonder a bit if there are two
or three hundred readers of CLINICAL MEDI-
CINE who will want copies of this book. The
price is only \$1.00, and it is published by
Forbes & Co., Chicago. Doubtless you can
secure it from your book dealer.

"INANITION FEVER" OR SKIN IRRITA- TION OF THE NEWBORN?

I am a reader of CLINICAL MEDICINE, and
I regard it as one of my best journals: From
it I obtain many valuable points. I have
just finished reading in my August number
what the different doctors have to say about
"inanition fever," or the kind of fever of
which they speak, and, as I have recently
had in practice three cases, I wish to say a
few words on the subject.

To begin with, to my mind, "inanition
fever," as applied to this class of fevers, is a
misnomer. No child, surely, would be so
nearly starved within the first twenty-four or
thirty-six hours; in fact, most of them can go
that long without food, especially if they are
given the breast, whether or not there is any
nourishment in it. Not often we see them
crying from hunger quite so soon.

All three of my cases were quite similar;
two of them were deliveries of my own, one
was delivered by a brother doctor. In each
instance I was called hurriedly about twenty-
four hours after the child was born. The
family would report that the baby had cried
almost continually since about six hours
after delivery. I would find the little one
almost exhausted and crying with every
breath, while there was a high fever (101°
to 104° F.), and skin red and hot to the touch.
The people felt sure the child could not live
and only had called me hoping that I could
give temporary relief so that death might be
more easy.

I remember that when these children were
delivered they were given to an old granny
woman to bathe, this being the custom with
most of us doctors, while the granny women
take this as part of their job; and I am free
to admit that we are often too careless in

allowing them to proceed without giving strict orders as to the manner of bathing and dressing the child. They always first grease the child all over with lard or some other stale grease and then proceed to wash and scrub it with a rag and any kind of old soap.

Right here is where the trouble starts: lard, scrubbing, and soap (alkali soap) to the tender soft skin of an infant is enough to burn or eat the toughest skin. The skin becomes swollen and thick, the pores of the skin are closed from swelling and from the grease (enough to cause rise of temperature, I think)—do you wonder the little thing is crying, with its skin simply "cooked" by the alkali soap? And let me say here, too, that this is where most of the old-women's "hives" come in.

I relieved all of my patients right away in a simple manner. I ordered a bowl of warm water and added to it about an ounce of acetic acid, then gave the little sufferer a general bath, taking good care of the eyes. Taking the child from the water, I dried it thoroughly with a soft cloth, then applied freely an acid lotion known as eczemadine (made by William A. Webster, Memphis, Tenn.)—a preparation I have used and found to be good. This lotion I let dry in the air, then powdered the child over, from head to foot, with borated talcum. The child ceased crying and fell asleep in my hands, its temperature receded, the skin cleared, and there was no further trouble, or, in other words, I was never called upon again. The families reported that the child made an uneventful recovery.

Try this in your next cases, doctor, and see how it works; then report to the "family." Meantime I should like to hear what some of the brethren have to say about this.

Ocala, Ga.

GABE W. WILLIS.

OUR LONDON LETTER: THE CLINICAL CONGRESS

[Continued from September issue, page 815]

To revert to the Congress. On the second day in the evening section of general surgery, a paper was read by Dr. Henry Jellett, of Dublin, in which he urged systematic suture of the levator ani muscle in perineorrhaphy. The speaker combated the idea that the operation was difficult or involved extensive dissection, maintaining that there were no anatomical or practical difficulties. He described the mode of operation, and claimed for it ease and rapidity, as it rarely takes more

than fifteen minutes to perform. The paper was discussed by F. J. McCann, of London.

Mr. Robert Jones, of Liverpool, then read a paper on internal derangements of the knee, the most common form relating to the internal semilunar cartilage. He described the method of diagnosis, and then the reduction during the acute stage, after the acute symptoms are over, and when several recurrences have taken place. He refuses to operate in any case seen immediately after the first displacement, for, so many patients get well under appropriate treatment. He does not encourage operation in painless recurrent trouble not followed by joint effusion, but advocates it where recurrence is followed by acute symptoms and where a strenuous athletic life is a means of livelihood or a physical necessity. He has a real dread of accidental infection of the knee-joint, which is peculiarly susceptible thereto, and avoids operating in presence of effusion or moving the joint during operation. He prefers the limb to hang in flexion over the end of the table.

Dr. Robert Milne, of London, said he had met with the following pathological conditions of the internal semilunar cartilage: longitudinal splitting of the cartilage; complete separation of its anterior end; and a transverse tear and separation of the posterior end of the cartilage.

In the Specialty Section, on the same evening, Prof. E. Schmiegelow, of Copenhagen, read a paper on the results of laryngofissure for intrinsic cancer of the larynx, based on 33 cases handled, in which there were three-years' cure in 11 cases, one- to three-years' in 7, recurrence in 10, death from operation in 5. In a table combining these figures with those of Semon, Chiari, and Sir St. Clair Thomson, the totals were: cases, 96; three-years' cure, 44; under three-years' cure, 17; under one-year, 1; recurrence, 25; besides deaths from operation, 9. Thus, 63½ percent of 96 patients remained cured after more than one year. He described his method of operating.

Sir St. Clair Thomson, in discussing the paper, commended the greater alertness in Denmark to discern conditions relievable by operation. He endorsed Schmiegelow's teaching and technic. He had had 17 operations, without a death, with 2 recurrences, and 15 cases without recurrence, 5 of them remaining well for more than three years.

Dr. J. M. West, of Baltimore and Berlin, described the intranasal surgery of the lacrimal apparatus, based on an experience in 225 operations. Dr. D. R. Paterson, of

Cardiff, supported Dr. West's contentions, and spoke hopefully, though not dogmatically, as to the permanence of relief in recent cases. Dr. Charles W. Richardson, of Washington, read a paper on congenital atresia of the post-nasal orifice, which was discussed by Dr. Dundas Grant, of London.

On Wednesday, July 30, Dr. George E. Armstrong, of Montreal, read a very interesting paper on typhoid perforation. He spoke of the very heavy mortality in Canada and the United States, in the four years 1909 to 1912, inclusive, from a disease which could be surely arrested, by act of parliament and municipal legislation, through a pure water supply and sufficient drainage, and asked why towns and cities should not be made as responsible financially for loss of time and life from a preventable disease as transportation companies were made responsible for preventable accidents.

Recent figures of 9713 cases in England, Canada, and the United States showed that more than one-third of the deaths from typhoid fever resulted from perforation, which was more common in men than in women, and more in adults than in children. He contended that, generally speaking, it would be true to say that a typhoid perforation not closed by the surgeon always was fatal, the only exception being where a perforation of the large bowel occurred between the layers of its mesenteric attachment. He discussed the early symptoms in detail, placing pain first (75 percent of his series of 83 cases), then change in the patient's expression (65 percent very definite, 28 percent gradual), tenderness (88 percent), rigidity (85 percent). Little or no value, he said, could be attached to the absence of liver dulness. The fall in temperature often spoken of rarely occurred; in one case the temperature rose, from normal, to 104° F., in two hours. The pulse quickened in 95 percent, a rapid change from slow and full to rapid and small was frequent.

It must be admitted, however, that perforation in typhoid fever might take place without any suggestive symptoms, and the failure to find a perforation upon operation did not necessarily reflect upon the diagnostician's skill and judgment. Persistent pain, definite change for the worse in the patient's expression, abdominal or rectal tenderness, rounding up of the abdomen, and increased tenderness on pressure rendered the likelihood of perforation very great, even without alteration in temperature or pulse and in the absence of vomiting.

As a rule, he preferred local anesthesia: a 1-percent solution of novocaine with 2 drops of adrenalin to the dram. The perforation was nearly always found in the last 12 or 24 inches of the ileum. Generally two through-and-through sutures closed the opening, two rows of fine Lembert sutures completing the operation. Multiple perforation should always be looked for.

The paper was discussed by Sir Anthony Bowlby, of London, who said that a survey of his operative cases from 1896 to 1913 showed his experience of fatal typhoid accidents to be limited by the diminution of typhoid and typhoid mortality that had taken place in this country. From 1870 to 1880, deaths from perforation were 23 percent; 1880 to 1890, 20 percent; 1890 to 1900, 17 percent; 1900 to 1910, 9 percent; 1911, 7 percent; and 1912, 4 percent. The South African war, however, had given him a much larger experience with typhoid fever. He agreed that most cases of supposed recovery after perforation without surgical intervention were not really cases of perforation, a condition which almost invariably was fatal unless operation be performed. A sufficiently early diagnosis for useful operation generally could be made.

He urged that in typhoid cases preliminary arrangements for immediate operation should always be kept ready. More than half the cases of perforation were not given the chance of operation. Sudden large hemorrhages conduced to the liability. A blood count should be made as a routine measure two or three times a week in all cases of typhoid fever. He agreed with Doctor Armstrong as to the significance of the patient's expression. A rigor after the second week should always excite suspicion.

The extremely interesting paper by Dr. C. H. Mayo—"of the world," as Doctor Murphy happily introduced him—on the primary and late results of operation in exophthalmic goiter is entirely too full of meat to admit of adequate condensation. Like many of the other papers above referred to, it will be found at length in *The Lancet* of August 1, and will doubtless be made accessible to American readers in one or the other of their weeklies.

Doctor Mayo was listened to very attentively by a large and representative gathering as he discussed in detail the pathology, the history of the operation, the various types of goiter, the methods of operation by ligation, sympathectomy, thyroidectomy, and

the mortality, and reported in brief the results of 18 cases at periods ranging from one to seven years after operation. Up to June 15, 1914, 6868 operations had been performed for goiter in the Mayo clinic.

The paper was very ably discussed, chiefly on the clinical side, by Dr. James Berry, of London, who said that his experience was only in hundreds, not in thousands, like that of Doctor Mayo's. He had done 966 operations for removal of goiter, or, including ligation of thyroid arteries, a little over 1000. While at first opposed to operation in exophthalmic goiter as too dangerous, experience and improvement in technic had altered his views. He referred to Doctor Mayo's view, that operation should be avoided during mental irritability, muscular weakness, and acute cardiac dilatation, and said that in many severe cases ligation of a superior thyroid artery could be safely and usefully performed when large procedures were not justified. He had performed 215 operations for hyperthyroidism since 1912, of which 42 were in well-marked exophthalmic goiter, with 1 death; in the other 173, there were 2 deaths. Nearly all the patients were markedly benefited, generally and locally.

The special discussions on Wednesday evening were as follows: Skiagraphy of the mastoid region and its use in the detection of disease, by Dr. Logan Turner, of Edinburgh; discussed by Mr. Sidney Scott, of London. Considerations which determine the extent of an operation in septic invasion of the lateral sinus, by Dr. H. E. Jones, of Liverpool; discussed by Dr. Hunter Tod. Oculomotor paralysis of otitic origin, by Dr. F. H. Westmacott, of Manchester; discussed by Dr. Dan McKenzie, of London.

In my next letter, I hope to present a brief abstract of the remaining papers of the Congress and a few desultory notes in conclusion—that is, if the utter dislocation of all the proceedings of normal life which this fateful war threatens will permit.

London

"K"

ACIDITY AND FOOD POISONS

Your much valued AMERICAN JOURNAL OF CLINICAL MEDICINE is taken by my office partner, Dr. T. N. Rogers, and I beg leave to make reply to the article by T. G. Atkinson in the July number.

Every medical journal that comes into our office contains articles on acidemia, its

etiology, treatment, and methods of urinary analysis.

The whole nation seems to be sour, physically, mentally, and morally. The doctors advise soda, and look wise.

The admitted method of treatment of all human ills is, to remove the cause, but the administration of alkali only increases the generation of acid by the body, thereby doing harm instead of good.

The only rational treatment of acidemia is, to cease the ingestion both of alkalis and acids and let nature run its laboratory unhindered.

Doctor Atkinson tells us that tomatoes do not cause cancer, and I do not know that they do; but I do know that tomatoes increase acidemia, and it is my belief that acidemia plays an important part in the cause of cancer. Consequently I am of the opinion that certain people are injured by tomatoes, and that, if a cancerous condition is impending or present, it is advisable to consider carefully the use of tomatoes as a food by such individuals.

It is a common thing to find people who crave sour foods, and it is my observation that such persons generally have some disturbance of the stomach or liver.

Instead of blindly following the dictates of a diseased stomach by indulging largely in tomatoes, vinegar, pickles, acid fruits, acid drinks, and so on, I advise the correction of the stomach or liver trouble, whereupon the craving will soon be forgotten.

The craving for tobacco and liquor I have frequently found to originate from the same causes, and the administration of leptandrin will produce excellent results in tobacco chewers by its action upon the liver.

The Remsen Board may tell us that alum is innocuous, but it is my belief that minerals in general that are not components of the human body were wisely left out by our Creator, and I do not intend to try to improve upon nature.

Doctor Wiley gave us a scientific and honest administration, and the conscienceless food venders have been busy ever since trying to discredit him; but the American people are going to stick by Wiley, and what the Remsen Board or any other board has to say about it, will not be believed.

Food preservatives of all kinds should be labeled "poison," and it is only a question of an honest food commission as to what their decision is.

Tin poisoning is very similar to catarrh and consumption, and all foods in tin cans should

be taboo in such cases. If you wish to test the solubility of tin, put some water into a tin pan, either new or old, and within an hour you can taste the tin plainly. Then can you still doubt that all food in tin cans is impregnated with tin? If so, does it not look reasonable that the American nation is being poisoned with tin?

Then take down a homeopathic materia medica and compare the symptoms of tin poisoning with those of consumption, and you will be somewhat surprised.

All disease is caused by perversion of function; that is to say, if the body is in perfect condition, it is immune to disease. So, the only rational way of fighting the white plague is, to study out the many hundreds of ways in which we transgress the laws of nature.

That the ingestion of foods preserved in tin cans, and all the other manufactured foods, plays an important part in weakening the human race, is not a new thought, and the sooner we acknowledge it as a profession and start the fight in the right direction, the sooner will we, as a profession, reclaim our natural right to the old respect in which we were formerly held by the people.

C. L. FAIRBANKS.

Sault Ste. Marie, Mich.

[We referred Doctor Fairbanks' letter to Doctor Atkinson, author of the little paper titled "Concerning Baking Powder," which the former here has criticized. The latter's comment follows:

"Doctor Fairbanks has let off an amazing charge of grape-shot at my modest, unpretentious article, hitting all around the subject with bewildering versatility, but, so far as I can discover, not making much of a dent in the bullseye.

"Certainly, I had no idea I was raising the vexed question of acidemia, its causes and treatment; and I really must humbly decline to enter into a detailed discussion of this problem here, as I am allowed only a little bit of space in which to make this rejoinder. I might remark, in passing, however, that, if the doctor is going to observe rigidly his determination to cease the ingestion both of alkalis and acids, I fear he is doomed to a rather restricted diet. The cause of cancer, the significance of perverted gastric cravings, and the pathology of tobacco and liquor addiction—interesting subjects as they are—

I must also beg Doctor Fairbanks to excuse me from discussing, as being rather wide of the aim and content of my article on baking powders.

"The real animus of the Doctor's letter, so far as it actually relates to my article, seems to be a rush to the defense of Doctor Wiley against the findings of the Remsen Board. He appears to resent the fact that the Remsen Board should have handed down a decision in conflict with the rulings of the former chief chemist of the Bureau of Chemistry. Indeed, his feeling is so strong in the matter that it impels him absolutely to refuse to see the plain facts which the Remsen Board has established, just because they come *via* the Remsen Board. The American people, he says, (by which, of course, he means himself, since no man can speak for any wider circle), are going to stick by Wiley, and what the Remsen Board or any other board has to say about it will not be believed.

"But isn't that a good deal like shouting, 'My country, right or wrong?' And isn't that rather a foolish attitude for a scientific man? I have no quarrel with Doctor Wiley or with the honesty of his administration. Neither do I hold any brief for the Remsen Board. None of these gentlemen knows me, or I them. It is not a question of what Doctor Wiley says or what the Remsen Board says, but of the facts; and nobody has any monopoly on facts—you and I can prove them just as well as the Remsen Board could, and did.

"That's just the difference between *ex officio* rulings of a government department and the findings of a scientific board with no authority behind it except what it derives from indisputable facts. You and I can neither question nor overturn government rulings; but we can verify or disprove scientific findings to our hearts' content. So the matter of the harmlessness of alum in baking-powders is not a question of credibility as between Doctor Wiley and the Remsen Board; it is a matter of fact, which happened to be demonstrated by the Remsen Board, but could just as well have been demonstrated by Doctor Fairbanks himself.

"Tin poisoning is another subject which I cannot allow myself to go into here. I may agree with a great deal of Doctor Fairbanks' position on this subject, but it does not concern the wholesomeness of baking-powder since these are packed dry and therefore do not involve the question of the solubility of tin."—Ed.]

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Continued from page 838]

THE tonic hysteric spasm condition is succeeded by the clonic phase. The muscles of the face and limbs are thrown into rhythmic movements. Consciousness is blunted. The final phase of the first period is that of resolution. The patient becomes relaxed, lies with head to one side, and there is much sialorrhea. In only exceptional cases is there incontinence of urine or of feces. Slight sleep may occur.

After a short interval the second period sets in, and because of its extravagantly disordered contortions and its seemingly regulated purposive performances it has been called the period of "clownism." The most common movement in this stage, as J. Hendrie Lloyd points out, is the so-called "arc of a circle," in which the patient assumes a position either of complete or of incomplete opisthotonos. The patient may assume this position lying either on her back or on her side. Other movements of extreme contortion occur. Sauvages applied the term *hysteria libidinosa* to cases in which, during convulsion, the patient alternates rapidly from opisthotonos to dorsal decubitus.

The most common of the regulated types is, as Lloyd remarks, that called "salutation," in which the patient, lying on her back, suddenly bends the body forward until the head almost touches the knees; this being repeated many times. Others consist in bending and arching the body and flexing and extending the limbs in various ways, rapidly repeated, usually while the patient reclines on her bed.

This extreme motor agitation seems to have a mental association or to be the expression of a mental state. Sometimes this mental disorder appears to bystanders to be quite alarming and may seem to have a veritable demoniac element in it. There is no loss of consciousness during the second period. The patient seems to react to some mental stimulus, but there is not the associa-

tion with delusions and hallucinations that occur in the next period.

The next, or third, period has been called by Charcot the period of passionate attitudes. In this period, Breuer and Freud see the hallucinatory reproduction of a recollection which is full of significance for the origin of the hysteric manifestations. Freud believes that in nearly every case a primary lesion of the sexual emotional sphere exists, and dating from puberty. In nearly every case, the intimately private nature of the lesion causes it to be carefully hidden and to be forcibly ignored, mentally, by the victim of it.

During this third period, the patient does not feel pain or touch. The conjunctivæ are insensible. Hearing is lost. The patient is unconscious or oblivious after the attack, although some remembrances of the period may be retained. It is very dangerous, however, to accept such remembrances as facts, since the patient may so clearly remember her sexual emotional state as to ascribe to it an objective origin for which someone else is responsible.

The fourth period has been denominated by Charcot the "period of *delire*." "Delire" is not synonymous with delirium, but simply indicates an intellectual disturbance which may or may not involve the emotional sphere. Practically, this period is the returning to self-consciousness from the previous period of emotional disturbance. During this period, according to Lloyd, the sensory stigmata seen in the third stage may here persist. Added to them, are motor stigmata generally absent before. The most common of the latter are various forms of contracture, and which may persist for days after the seizure. Other motor stigmata sometimes originating in this period and persisting as relics or the convulsion are the several varieties of paralysis and tremor. The mental state may pass into an

obstinate mutism or even into trance or lethargy.

Charcot, in 1888, claimed that so-called hysteric unilateral paralysis of the facial, lingual, and oculomotor muscles are, in reality, hemispasms. This view of Charcot was later abandoned by himself and his followers. Hitzig, of Halle (Germany) has shown that disorders of the oculomotor mechanisms are comparatively rare in hysteria, although derangements of the visual fields and phenomena owing to fatigue are very common. He reports the case of a 36-year-old Polish laborer who had previously suffered from "inflammation of the eyes."

The man had indulged freely in whisky. In August, 1895, he wounded himself in the leg. The wound healed rapidly, but unfortunately he conceived the idea that, as there had been no suppuration, inflammation would occur elsewhere. After a week, inflammation actually did appear in the eyes, followed by diplopia and lid ptosis. This condition lasted a long time without distressing him, but when he found himself unable to see his children, who had returned home in September, 1896, he attempted suicide by drowning, and for two days appeared insane. Upon admission (September, 1896), there was complete ptosis of the lids on both sides; both eyes were turned inward and downward. Later (in November), the pupils did not react to light and the patient professed to be seeing nothing. There was no evidence of any spasm of the orbicularis muscles. There was partial unilateral loss of taste and smell. Tactile sensation was absent over the whole body and there was analgesia in the right arm, left leg, and left half of the trunk, neck, and head.

Temporary improvement in the eye symptoms had followed chloroform narcosis in October, but their complete disappearance followed electricity and suggestion in November. A temporary partial hysterical deafness was likewise recovered from. In January, 1897, the patient's condition was practically normal in every respect. Some of the eye symptoms were evidently due to spasm, namely, the squinting and the myosis.

Hitzig ascribed these phenomena to hysteric paralysis of the levator muscles of the eyelids. Kiernen reports a case which corroborates that reported by Hitzig. The patient, a 33-year-old married multipara, comes

from a family rife with neurotic taint. Neuroses of various types are frequent in this family for three generations. One sister has periodical attacks of nymphomania, whose morbid nature she recognized and therefore was able to control herself. The other children suffered from cerebral phenomena from very slight causes. One brother had had infantile hemiplegia, with athetoid phenomena. There had been numerous children for three generations, the greater portion of whom died in infancy.

The present patient had visceral neuroses, simulating at times peritonitis and gallstone colic and attended by pyrexia, followed by apyretic states, when the temperature fell, from 109°, to 90° F. in a few hours, without corresponding constitutional disturbances. Paralysis and local anesthesia were easily produced in this state through suggestion. On one occasion discolorations of the skin resulted from an accidental suggestion that the skin looked slightly reddened at the seat of a paresthesia.

The patient had an attack of "visceralgia" simulating gallstone colic. This left her much exhausted, and in this state the suggestion was made by a neighbor that her eyes looked weak; whereupon slight amblyopia resulted, followed by double ptosis. The "visceralgia" disappeared under what was chiefly moral treatment, but the ptosis persisted for some weeks. One day while the patient was relating her symptoms a window fell and she passed into a hypnotic state. While in this state the suggestion was made that her ptosis was under full control of her will and that she would hereafter be able to control it. On her awakening from the hypnotic state the ptosis and amblyopia disappeared.

The last attack occurred under the following circumstances: The patient, while east, had been treated for headache, by the correction, with glasses, of refractive errors. Soon after her return to Chicago, she suffered from a very obstinate sub-occipital headache. Through much talk by her friends, she was persuaded that this headache was of optical origin and that the glasses had been improperly fitted. She was found to be badly constipated. The persuasion, however, that the eye had been improperly fitted with glasses continued. She finally had a recurrence of the old symptoms of ptosis and amblyopia. This condition, however, disappeared with the disappearance of the headache, which yielded very rapidly to dietetic treatment and cathartics. Since this time there has been no

return of the ptosis and the patient has not complained either of eye-strain or headache.

According to Galezowski, Parinaud, and Borel, a true hysteric myopia or hyperopia may occur. The typical globus hystericus in the opinion of Preston is, in part at least, a contracture. Some patients describe this peculiar phenomenon as a ball which begins in the region of the stomach and rapidly ascends to the throat. When it has reached the throat it remains a greater or less length of time in that position. Rarely the ball seems a very small body in the throat, and, again, merely a sense of constriction. While perhaps a large part of this phenomenon is purely psychic and belongs to the category of sensory disturbances, it is probable that there is present more or less contracture of muscle-fiber.

Contracture of the bladder, with retention of urine, is not uncommon. It should be remembered, however, that the bladder, as Mosso and Pelacani have shown, is an even more delicate esthesiometer than the iris, and probably the most delicate in the body.

Mosso and Pelacani found that contraction of the bladder follows directly upon the slightest stimulation of any sensory nerve, and also that all the varying conditions of the organism which raise the blood pressure and excite the respiratory centers produce an immediate and measurable effect upon the bladder. These investigators found by experiments upon several young women that, when a plethysmograph was brought into connection with the bladder, even a slight touch with the finger on the back of the subject's hand produced a noticeable contraction of the bladder; and, whenever the subject spoke or was spoken to or made the slightest mental exertion, there was a similar contraction. These reactions are much more delicate than those of the blood-vessels and cannot be paralleled by any other part of the organism.

The bladder, as Born puts it, is the mirror of the soul. It would be equally correct to say that, to some extent, the soul is the mirror of the bladder. The fainter vesical contractions cannot be said to play a recognizable part in emotion, but when they attain a somewhat higher degree of intensity they form a well-recognized part. "A nervous bladder," as Goodell puts it, "is one of the earliest symptoms of a nervous brain." Contraction of the bladder plays a part in the constitution of various emotional states of fear, anxiety, and suspense.

As regards the diagnosis of hysteria, it must be remembered that hysteria bears the same relation to neurasthenia that paretic dementia does to locomotor ataxia; that is to say, hysteria is the cerebral type of a neurosis the spinal symptoms of which are commonest in neurasthenia.

Since hysteria may be produced by any condition causing nervous disorder or disease, it may complicate every one of the great neuroses, as well as the great constitutional disorders. It may occur as a temporary expression of conditions of autointoxication or during the period of nervous adynamia after exhausting diseases. When it occurs in degenerate organisms or, more properly, in organisms hereditarily defective, the disorder will be peculiarly protracted and the nerve symptoms will simulate organic diseases to a marked degree.

It will thus be seen that in diagnosis the underlying state of the hysteric has to be taken into consideration.

ADRENALIN AS AN ANALGESIC

A very interesting subject was brought up at the April meeting at Wiesbaden of the German Congress for Internal Medicine, in a paper read by R. Schmidt, of Prague, who discussed (*Muench. Med. Woch.*, No. 20, p. 1141) the probable reason for the differing sensibility of individuals to pain, as also its variability in the same person. Interest in this problem, the speaker thought, would grow if it could be demonstrated that this characteristic is determined by specific substances in the blood and body-fluids which definitely affect pain-sensation, whether in the sense of augmenting or of diminishing the same.

Such a relationship Schmidt believes can be attributed to the adrenalin in the circulation, as shown by practical experience. Thus, from among his experiments he relates how the hypodermic injection of this substance on the anterior aspect of the thigh had resulted in great relief to arthritic patients; often the salicylates becoming unnecessary, even. In fact, adrenalin can positively be classed with analgesics.

These statements were fully corroborated by Gudzent, of Berlin, who also has seen excellent results from this agent in a large percentage of cases of polyarthritis. The latter has employed a 1-per cent solution of adrenalin intramuscularly.

Among the Books

NUTT: "DISEASES OF THE FOOT"

Diseases and Deformities of the Foot. By John Joseph Nutt, B. L., M. D., surgeon-in-chief, New York State Hospital for Crippled and Deformed Children. Illustrated. New York: E. B. Treat & Co. 1913.

To Messrs. Treat & Co. we are indebted for a great many monographs on various phases of medicine and surgery. The monograph is an exceedingly valuable form of medical literature, whether it be of a purely scientific or of a clinical character, since it is always sure to contain vital, original matter, fresh-forged on the red-hot anvil of the author's personal experience; and that, after all, is the sort of contribution to any science or art that counts.

The author of this little monograph on diseases and deformities of the foot has had ample opportunity for study and practice of the subject whereof he writes, and he has taken full advantage of it. As a result of his years of experience in orthopedic work, he has become convinced that the foot and its treatment separates itself out from the rest of orthopedics, because of its simplicity and the readiness with which the general practitioner can prevent deformities and correct abuses and treat minor diseases of the bones and joints of the foot. Every kind of disease and deformity of the foot which the practitioner can possibly be called upon to treat is here described and dealt with by a man who is thoroughly at home with his subject.

PATERSON: "ANATOMIST'S NOTE-BOOK"

The Anatomist's Notebook: A Guide to the Dissection of the Human Body. By A. Melville Paterson, M. D., F. R. C. S., professor of anatomy, University of Liverpool. London: The Oxford University Press. 1914.

This is purely and simply a working-notebook for use in the dissecting-room, and is, as the author naively writes in his preface, "to be supplemented by means of a knowledge of osteology and by a systematic textbook."

In the matter of arrangement, the body is divided, for dissection purposes, into head,

thorax, abdomen, and limbs. Otherwise, the work is laid out in accordance with the routine practice customary in English medical schools, and which does not materially differ from that in our own colleges. The text is plentifully interspersed with blank pages for the student's notes, besides containing rough working-drawings, which the student is expected to fill in with the details as he develops them with his scalpel.

The whole plan of the notebook is an excellent one, and we do not doubt that many medical schools in this country will adopt it in their anatomical laboratories. But, its value does not cease with the close of the dissecting-course; it is a capital memorizer and reference-book for subsequent years, even after the student shall have become a practitioner.

LOWRY: "THE HOME NURSE"

The Home Nurse. By E. B. Lowry, M. D., author of "Herself," "Confidences," "Truths," etc. Chicago: Forbes & Co. 1914. Price \$1.00.

The engagement of a trained nurse in the home is not always practicable in every instance of sickness. Some patients cannot afford her services; others are not sick enough to make a trained nurse necessary; and there are various other reasons why she cannot be in attendance in every sick-room. How, then, shall we take care of this great class of patients? It would seem that the only solution to the rather vexing problem is the home-trained nurse—the mother, the wife or other member of the family, properly instructed to take care of any sick person.

But, if such a person is to fulfill the demands of modern treatment, she must have a certain amount of technical training. And how, then, shall the home nurse be trained?

Well, here is the answer to that question, right here in our hands. Advise your patrons to procure a copy of Lowry's book, and to read, mark, learn, and inwardly digest the simple but valuable matter that it contains; not to wait for emergencies to drive them to the book, but, on the principle, "In time of

peace prepare for war," to peruse it thoughtfully and attentively at their leisure, so that when sickness comes and they are called upon to play their part they may be competent to undertake it.

This home nursing, of course, is not intended to replace or supplant the hospital-trained nurse; still, we repeat, there are many occasions when the doctor is obliged to depend upon some member of the household; and for such times it is well to be prepared.

YEAR-BOOK: "PRACTICAL MEDICINE SERIES"

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D. Chicago: The Year Book Publishers.

Skin and Venereal Diseases, and Miscellaneous Topics. Edited by W. L. Baum, M. D., and Harold N. Moyer, M. D. Series of 1913, Volume IX. Price \$1.35.

Nervous and Mental Diseases. Edited by Hugh T. Patrick, M. D., and Peter Bassoe, M. D. Series of 1913, Volume X. Price \$1.35.

The two volumes here named complete the year's series of this annual. The current literature on the subjects in question has been selected and abstracted in the same careful and discriminating fashion as in the previous volumes. It is impossible adequately to review books of this kind, since they are themselves in the nature of a review of the progress made during the year which they represent. They furnish an excellent medium through which the practitioner may keep himself in line with the rapid advance movement in medical science and practice. The best plan, of course, is, to subscribe for the entire series, at the rate of \$10 per year; but those who are interested only in certain departments of work can obtain single volumes at prices ranging from \$1.25 to \$1.50—an extremely low figure, considering the valuable matter they contain.

STEDMAN: "HANDBOOK OF THE MEDICAL SCIENCES"

A Reference Handbook of the Medical Sciences. Edited by Thomas L. Stedman, A. M., M. D. Complete in Eight Volumes. Third edition, revised and enlarged. Volume III. New York: William Wood & Co. 1914. Price \$7.00.

In the nature of things, it is impossible to pick out any particular items or features of a work, like this one, for special commendation or criticism, since it is a part of the purpose and method of the undertaking to give every subject thorough and masterly treatment, according to the importance which that subject holds in the present-day system of medicine. All one can venture to say is, whether or not this has been done, on the whole, with proper discrimination and judgment; and we do not hesitate to affirm that it has, at least in the volume before us. Doctor Stedman has over and over again proved his ability and discretion as an editor of large reference-books; and in this largest of all his efforts in this direction he has amply justified himself.

While the alphabetical arrangement does not, in this volume, carry us as far as the word Eye, yet, the various aspects of the eye and its diseases come in for a large share of attention. So do the ear, the digestive tract, and several other important structures. At the latter end of the book there is a large section devoted to electricity and all of its medical modes and applications, the treatment of which is splendidly up to date and complete.

RANKIN: "ELEMENTS OF BANDAGING"

The Elements of Bandaging, and the Treatment of Fractures and Dislocations. By William Rankin, M. A., M. B., Ch. B., of the Western Infirmary, Glasgow. With 68 original illustrations. London: The Oxford University Press. 1913. Price \$1.50.

In the British medical schools—which, by the way, are all hospital-schools, i. e., the hospitals own and control the schools—it is the rule that every student in his senior year shall spend a certain number of months or weeks in the wards of the hospital as a "dresser." It is an excellent practice, for it insures, as a matter of routine, that every student shall receive a thorough practical training in this most important part of a doctor's daily work, and for which the American student but too often depends upon the experience of an internship that does not materialize.

This little manual of Rankin's is based upon demonstrations of bandaging and the management of fractures and dislocations as made by him and his assistants in this ward routine. It deals, as the author aptly says, with "details which are not handily found in most textbooks," and is intended for those

whose experience in this direction is limited. Greatest stress is laid upon the commonest conditions and the everyday complications. Simplicity is the keynote of the book; however, the author assures us that every procedure and method described is one which has proved most satisfactory in actual practice. The illustrations are capital. It is a most helpful little book.

BALLENGER: "NOSE, THROAT, AND EAR"

Diseases of the Nose, Throat, and Ear: Medical and Surgical. By William Lincoln Ballenger, M. D., professor of otology, rhinology, and laryngology, College of Physicians and Surgeons, Chicago. Fourth edition, revised and enlarged, with 536 engravings and 33 plates. Philadelphia and New York: Lea & Febiger. 1914. Price \$5.00.

That Professor Ballenger's book is achieving the success that it deserves, is evident from its rapid passage into a fourth edition. And this, in turn, does, in our opinion, but evidence the good taste and judgment of the medical public: for, to our thinking, Ballenger's "Diseases of the Nose, Throat, and Ear" stands without a serious rival among the practical works on the subject on this side of the Atlantic.

The call for a new edition has been utilized by the author to give the book an entire overhauling and to bring every part of it fully up to the present. However, the most noteworthy changes and additions will be found in the chapters devoted to the labyrinth, great care having been bestowed upon them, so that this subject is here presented with a fulness and thoroughness unequalled in any other textbook of its kind.

To give a few details: 13 original colored plates illustrate the physiological and pathological manifestations of nystagmus, a careful study of which will alone suffice to convey a clear idea of the nature of that condition. Every necessary operation involved is illustrated, while the technic invariably is outlined in terms that can not be misunderstood. The work appeals equally to the specialist and the general practitioner, and undoubtedly will continue to enjoy the popularity that necessitates for four editions within but six years.

HOPKIRK: "INFLUENZA"

Influenza: Its History, Nature, Cause, and Treatment. By Arthur F. Hopkirk, M. D., London: The Walter Scott Publishing Com-

pany, Ltd.; and New York: Charles Scribner's Sons. 1914.

This monograph presents an intelligible résumé of the history of influenza, from the earliest times up to the most recent English epidemic, and is compiled from the works of trustworthy chroniclers and investigators. In addition, it presents a more or less critical account of the views that have obtained at various times as to the epidemiology and etiology of the disease, as well as a detailed description of the different varieties of the malady, and of the treatment to be followed in the case of each of them.

In the chronological survey, the supposed place of origin, the course, and the geographical distribution of each epidemic is given; also, any particular symptoms that prevailed are noted, while the treatment employed is stated where this is possible. Meteorological phenomena are recorded, also the prevalence of other epidemic diseases or of epizootics before, during, or after each visitation of influenza.

In the sixth chapter, the whole question of treatment, medicinal and dietetic, is thoroughly gone into. Due attention is paid also to such questions as isolation, the sick-room, disinfection, nursing, the after-effects of influenza, convalescence, and so on. An appendix contains useful recipes for invalid cookery. Technical terms, the use of which could not be avoided, are explained in a glossary.

RYAN: "FIRST-AID DENTISTRY"

First-Aid Dentistry. By E. P. R. Ryan, lieutenant dental surgeon, U. S. Army. With 80 illustrations. Philadelphia: P. Blakiston's Son & Co. 1914. Price \$1.25.

Since dentistry became separated from medicine, these two disciplines have grown very far apart; much *too* far. The dentist knows or cares but little about the physiology and pathology, not to say the therapy, of the human body in general; and the physician, on his part, we fear, knows still less about the disorders and the treatment of the teeth. Called upon to render aid to an aching or disabled tooth, the doctor is just about as helpless and dumb as is a plain layman.

Doctor Ryan evidently recognizes this deplorable state of affairs, and, in a modest way, contributes his share toward remedying it. Not that his little book offers any plan for reuniting the two sciences or professions, of course; but it undertakes the more modest task of furnishing the medical man a little

practical knowledge of first-aid dentistry, so that at least in emergencies he may not find himself altogether at sea.

The author manifestly is a master of his subject and knows how to impart it in a thoroughly practical, helpful manner. The chapter on extractions is almost enough to make an expert extractor out of one who has never before had a forceps in his hand. The illustrations are capital; a great deal of credit for the efficiency of the book must be given the artist who took the photographs.

BURR: "PSYCHOLOGY AND MENTAL DISEASE"

Handbook of Psychology and Mental Disease. For Attendants, Nurses, Medical Classes, and Practitioners. By C. B. Burr, M. D., medical director of Oak Grove Hospital for Mental and Nervous Diseases. Fourth edition, revised and enlarged. With illustrations. Philadelphia: F. A. Davis & Co. 1914.

Author and publisher are to be commended, and the medical public (especially the medical student body) is to be congratulated upon producing at such a reasonable price so excellent a little book. Satisfactory treatises upon mental diseases, that combine scholarship with practical usefulness, are all too rare, and, thus, we value Doctor Burr's manual as a distinct acquisition to this class of medical literature. With refreshing clearness and remarkable power of terseness, he has contrived to link psychology and clinical phenomena in brief logical sequence, after a fashion that will delight the heart of the student, to whom alienism is generally a *bête noir*. Not many illustrations are incorporated, to be sure, for the subject is one that does not lend itself readily to portraiture; still, such as there are will be found of illuminating value.

We venture the assertion that the present edition will be as well received by reachets and students of mental diseases as cordially as have been the previous editions, and that this manual will continue to fill a real need in educational medicine.

HOYT: "PRACTICAL THERAPEUTICS"

Practical Therapeutics. By Daniel M. Hoyt, M. D., formerly instructor in therapeutics, University of Pennsylvania. Second edition, revised and rewritten. St. Louis: The C. V. Mosby Company. 1914. Price \$5.00.

The feature of this new edition of Hoyt's "Therapeutics" calling for special mention is its unique arrangement. By it, the reader has spread before him, at a glance, the nomenclature of the drug, its physiological action, in most instances also its specific action upon different organs (such as the brain, spinal cord, heart, arteries, skin, and intestines), the toxicology and antidotes, and the therapeutic indications and contraindications.

The text gives a description of all new and nonofficial drugs that have been passed by the Council of Chemistry and Pharmacy of the American Medical Association, followed by the indications for the use; it also gives the formulas and values of most proprietary remedies. Furthermore, it tells the dispensing physician what drugs he can use with greatest satisfaction to himself and to his patients. The therapeutic index will be found a handy time-saver to the busy practitioner. Altogether, this is a decidedly practical and helpful book, well worth its price to any physician.

JACKSON: "DISEASES OF THE SKIN"

The Ready-Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M. D., late professor of dermatology, College of Physicians and Surgeons, New York. With 115 illustrations and 6 plates. Seventh edition, thoroughly revised. New York and Philadelphia: Lea & Febiger. 1914.

We are not surprised that Doctor Jackson's work has attained to a seventh edition. There are none too many authoritative books on dermatology. Too often the subject is made a sort of adjunct to genitourinary specialties and comes to be largely a study of the cutaneous manifestations of syphilis. On the other hand, there is hardly any branch of medicine in which the ordinary practitioner stands in such crying need of definite, authoritative teaching as in this same department of skin diseases.

The present edition of this handbook has been thoroughly revised and brought up to the high-water mark of latter-day diagnostics and therapeutics, and thus is a distinct credit both to author and publishers. The only real criticism we have to offer (and we believe the same criticism was made in reviewing previous editions) is that it would have been a vast improvement if more of the illustrations had been in appropriate colors, for the reason that color plays so essential a part in the diagnosis of skin lesions.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6034.—“Tumor Over Spine in Lumbar Region.” O. H. S., Indiana, has under his care a young man twenty-five years of age who presents a growth in the lumbar region, near the spine, which resembles a sebaceous tumor; however, the hypodermic syringe, using a large needle, only brought out a bloody serum, while quite free hemorrhage occurred from the puncture. The tumor is 1 3-4 inches in diameter, movable, and the veins over it are rather prominent. The Doctor wishes to know whether it is advisable to remove this growth, or whether operation might produce a troublesome hemorrhage. The tumor has been coming on for five or six years. The patient experiences “darting pains” in the tumor; there is no pulsation; upon introducing the needle, it seemed to plunge into a cavity.

With our limited information about the nature of this growth, it is impossible to express a positive opinion as to the advisability of operation. The fact that the patient complains of darting pains in the tumor, and its situation over the spine and the discharge of bloody serum, calls for cautious procedure.

If you will send a specimen of the serum to a pathologist for examination, and outline diagrammatically the exact position of the tumor, we presumably shall be in a position to answer you more intelligently.

Are you quite sure that you did not puncture a superficial vessel? In inserting the needle, to secure serum, carefully avoid puncturing any vein. Examine the base of the growth very carefully and report exact conditions.

It is possible that you are dealing with a myoma. Myomata—sessile tumors over the lumbar fascia—generally, on section, look like colorless masses of transparent trembling jelly. These tumors frequently will recur after their removal.

We would hardly expect to find a sebaceous tumor in the lumbar region. It is just possi-

ble that the growth connects with the spinal canal and the sac contains spinal fluid.

QUERY 6035.—“Rachitis or Congenital Syphilis?” J. M. I., Indiana, writes as follows: “A child, 14 months old, has recently come under my care. The family history is good. The father, a strong, healthy-looking man, is a miner 37 years old. He had a severe attack of rheumatism for one year preceding the birth of this child. The mother, 39 years old, also is in good health at present; during the last seven months of pregnancy, however, she suffered from vomiting all the time, and all methods of treatment failed to afford relief.



A case of Rachitis

“The child weighed 9 pounds at birth. On the fourth day a small nodule was noticed on its right upper arm, and after that such nodules began to appear on the legs and forearms. One doctor claimed the disease to be periostitis. Another one diagnosed it a case of hereditary syphilis, and initiated corresponding treatment. However, the history it seems to me to exclude both of those diseases. A third physician consulted confessed inability to guess what the trouble might be. Thus it is that for now fourteen months this ailing child has had nothing done for it.

“In view of the history of long-continued maternal vomiting and the characteristic appearance of the child, I diagnosed the case

as one of rachitis. The anterior fontanelle is about two inches wide by three long. The forearms are bent, as shown in photograph, which also shows the condition of both legs and the swollen condition of upper portion of the left femur. The rachitic rosary can be seen plainly. Observe the large head, well rounded on the left side, but decidedly flat on the right. The position of the hands, as seen here, is not constant. The child has use of its hands.

"I am giving calcium sulphide as a means of stimulating the appetite, and find that it works like a charm. I can assure the people that the appetite will return in forty-eight hours or thereabout. The child was fed dextro-maltose in cow's milk, but after a few days it could not retain the milk; consequently the dextro-maltose is now given in water. Beef-tea is given three times a week. I intend to begin giving the nucleinated phosphates. The child shows signs of improvement and has gained flesh. It has cut only two teeth, and they are decaying; or, at least, breaking off. If I am wrong in my diagnosis, I should gladly be corrected, with the argument. Besides, if there is aught that can be done for this child and that I am not doing, please say so."

If you can positively exclude syphilis (and it seems that you may), there is little question that your diagnosis is correct; namely, the child suffers from a marked form of congenital rachitis. It is true that changes in the bones of the syphilitic child are more frequently present than any other lesion; in fact, by them, usually, syphilis is definitely recognized. The long bones are principally affected, the most important changes being at the junction of the shaft with the epiphyseal cartilage. Such lesion is termed "epiphyseal osteochondritis."

In rachitis, while the only important anatomic changes are found in the bone, it must not be regarded as a bone disease, but as a complex pathological process, the result of disturbed metabolism. We have, in this case, the typical rachitic skull, open fontanelle, "rachitic rosary," protuberant belly, exaggerated curve of the long bones, and other marks. Considering this clinical picture, in conjunction with the maternal history, we think that a diagnosis of rachitis cannot successfully be questioned.

Congenital rachitis, as we need not mention, is a comparatively rare disease in this country; in the larger cities of Europe, where mothers, during pregnancy, live under the most unfavorable conditions, it is quite common,

however. When the deformity is extreme, the prognosis as regards the restoration of normal conditions is unfavorable. In itself, rachitis is seldom the cause of death, although constituting a large factor in the mortality of the first few years, since it predisposes strongly to many forms of acute diseases.

The important remedies are codliver-oil, phosphorus, and the calcium salts. We should give this little patient calcium lactophosphate and the nucleinated phosphates in alternation, and in comparatively large doses (1 or 2 drams). Also, inunct each night half an ounce of codliver-oil. A highly nutritious diet is essential, of course.

In this connection, we would call attention to the chapter on the treatment of rachitis, in Candler's "Everyday Diseases of Children."

We are more than astonished at your experience with calcium sulphide and are wondering whether you do not mean calcium lactophosphate? In our practice, even 1-6 of a grain of calcium sulphide, repeated four times daily, virtually destroys the appetite, or at least modifies it to such an extent that we frequently give it to obese patients who overeat. Many, many times in the past decade the writer has been compelled to stop the administration of calcium sulphide, because the patients were unable to eat the necessary amount of food. The nucleinated phosphates were designed for use in just such cases as yours, and with codliver-oil and calcium lactophosphate will meet the requirements perfectly.

It would be well, of course, to try to correct the deformity of the long bones by graduated pressure. The earlier this is done, the better the results will be. It is more than probable, however, that osteoclasia will be necessary later on.

QUERY 6036.—"Pharyngeal Ulcer." A. W. T., California, acknowledging receipt of pathologist's report on a throat swabbing which contained many staphylococci, moderate number streptococci, few pneumococci, and few pus-cells, writes as follows:

"I should be pleased to be favored with some therapeutic suggestions regarding this case. The patient is a man 'smally' built, whose normal weight is 135 pounds, but who at this time weighs only 102 pounds. When he first consulted me, on June 25, he weighed 98 pounds, then increased within the month to 112 pounds. His temperature ranged from normal up to 104° F. at first, then went down to about normal. Now, it seems, the disease has taken on new life. Temperature

ranges from 100° to 102.5° F. and he is rapidly getting weaker. The sore in the throat, from which I sent you a swabbing, is looking fine, except that it has a tendency to spread; but pain from it is much less than formerly. I have applied, from time to time, weak solutions of formaldehyde, 25-percent lactic-acid solution, and 10-, 20- and 25-percent silver-nitrate solution. Owing to the man's aversion to medicine, I have not given him much internally; while he is very willing to take or do anything to improve his condition he vomits so very easily that he cannot retain medicines. At present I am giving him a solution of sulphate of iron, Brodnax's formula.

"He says that since December, 1913, he gradually grew worse, and feeling as though he had fever. Before this, he had always been healthy. He is a painter. His brothers and sisters are all healthy. A brother-in-law died of tuberculosis nine years ago. His father and mother are both living. The father's age is 63; that of the mother is 63. At one time they lived with him (previously), but at the time of his death he lived about three blocks distant, but visited him every day. He says that every precaution was taken to prevent the spreading of the disease.

"He had consulted other physicians before coming to me, and they pronounced his trouble 'ulceration' of the throat. The lesion, I should judge, is about the size of a half dollar piece and is situated just behind the anterior pillar. Virtually nothing of the tonsil is left. The ulcer extends almost to the median line. The other tonsil is quite small, but not inflamed."

As you will readily understand, doctor, this man may be tuberculous, yet no tubercle bacilli be present in the discharge from the throat ulcer. It is important to know the daily temperature range of the patient. We should be inclined to cauterize the ulcerated area, preferably with the electrocautery.

Thomson, in his "Diseases of the Nose and Throat," says: "Tuberculosis shows itself in (1) infiltration, (2) ulceration, (3) tumor formation, (4) acute miliary infection, and (5) healing areas by sclerosis. Secondary pyogenic infections may occur in tubercular ulcerations." We quote further.

"Unfortunately, tubercle bacilli occur scantily in discharges, and in lupus are found only with much difficulty. Lupus of the pharynx may occur primarily; more commonly it is a descending infection from the nose. . . . As the deposit increases, the surface becomes bosselated, the epithelium is destroyed, and, when the sticky secretion is wiped away, the

invaded area shows gelatinous, grayish mounds, separated by narrow crevasses. There is no red aureole around the healthy margin. The favorite site is the anterior pillars of the adjoining soft palate, which loses its elasticity and becomes insensitive and wooden. The tonsils generally escape. Secondary infection, with marked ulceration, may take place and destroy the tonsils, root of the tongue and adjoining soft parts. Syphilitic lesions are surrounded by an aureole of inflammation; the disease is more rapid and does not spare the tonsil.

"In this case, it is essential, in order to institute effective treatment, to ascertain definitely the character of the lesion. Wassermann and Von Pirquet reactions should be tried in order to settle the question definitely."

In nonsyphilitic lesions, the use of the cautery, and the administration of nuclein, at least 10 drops, and preferably absorbed from the buccal mucosa (instruct the patient to hold it in the mouth as long as possible), the arsenates and iodized calcium three times a day should produce results. An auto-genous bacterin might be administered with advantage.

The imperfect history presented does not enable us to prescribe with assurance. As, however, you have been using formalin, lactic acid, and so on, we assume that you deem the lesion tuberculous. Thorough cleansing of such an ulcer with hydrogen-dioxide solution, and the application of orthoform and euophen have proven satisfactory in our hands. Never apply orthoform unless the ulcer has first been cleansed. Inhalations of chloretone are strongly advised by Burney Yeo. Lactic acid, if employed, should be used in strengths of 50 percent, or stronger; the object being to produce an eschar that will not separate before one, two or three weeks. When the slough is detached, a healing ulcer is exposed. There are generally deeper deposits requiring a repetition of the cauterizing, so that from four to possibly twelve applications may have to be spread over as many months.

In our estimation, the galvanocautery is to be preferred in all cases where rest and hygiene do not promise a spontaneous cure. A very fine-pointed electrode brought to a white heat should be thrust firmly through the diseased area until its arrest shows that healthy tissue has been reached. Several cauterizations are made at one sitting, which should be repeated every ten to twenty days, and continued until complete healing occurs. Swabbing the lesion with galac-

tenzyme bouillon may be tried tentatively. Under any circumstances, we would be inclined to push nuclein, calx iodata, and the arsenates.

QUERY 6037.—“Wanted, a ‘Specific’ for Leucorrhea.” S. S. P., South Carolina, in his letter tells us that he is a believer in “specifics” and is all the time trying to find such—if possible. What he wants now is, a “positive cure for leucorrhea.” His experience during some thirty-odd years in the medical field is that few women go through life without at some time or other suffering from leucorrhea, and now he asks: “Why is it? What is it?” Then goes on to say:

“I always considered this a condition depending upon one or more causes. Of course, the thing to do is, to remove the cause, whereupon the discharge ceases; unfortunately, many times this is not so easily done. Now, then, comes the rub: What is the best thing to do to stop this very disagreeable discharge? My father was a physician, and he used to tell of at one time reading in a book about how to cure spavin in a horse, which ran about like this: ‘Give so and so, and, if that doesn’t cure, try this and that; if that is no good, try something else; then, if that fails, swap the horse off.’ Unfortunately, in our case, we don’t want to ‘swap off’ the lady patients, for there is where our bread (to say nothing about the butter) comes from. We want the patient to stick to us. What we are after is, to do something to *cure* these women, rid them of their whites.”

“Almost every doctor, if he has been in practice long enough, has some pet remedy that has given him good results in many cases. Give me as near a specific as you can, good editor, and do not tell me to try this thing and that thing, clear down the whole list of reputed cures. I want something I can depend upon every time. ‘A hard thing to do,’ do you say? Yes, indeed, it is a difficult proposition—and that is just why I want help from you or anyone else who knows.

“Thus, for instance, there is a vaginal leucorrhea and a uterine leucorrhea. Does any doctor really know what either of these conditions is? Does the doctor know for certain whether in a given case the trouble is a diseased condition of the mucous linings of the tract or whether it rather represents an effort of nature to try to get rid, through these membranes, of, say, some morbid constituent of the blood? What, I ask, is this discharge, anyway? Is it a profusion of

leukocytes? If so, where did they come from? What is the answer?”

Verily, doctor, you request the impossible! With “thirty years’ experience in the medical field,” you certainly must know that there could be no such thing as a “specific” or a “positive cure” for leucorrhea.

The term “leucorrhea” signifies merely a flow of a whitish substance. Even certain remedial agents that are effective in one case of uncomplicated “whites” (true leucorrhea) might fail entirely in another. Here, as elsewhere, we must discover and then correct the causative condition, the source of the discharge. If this is true for simple, uncomplicated leucorrhea of young and more or less chlorotic women, how could we possibly have a “specific” for the “leucorrhea” of endometritis, cervicitis, vaginitis, and that host of other offending conditions? You will find this matter fairly well covered in Dr. C. H. Candler’s articles that appeared in *CLINICAL MEDICINE* of September, 1911 to May, 1912, under the general heading of “The General Practitioner as a Gynecologist.”

In the majority of cases of leucorrhea, local and systemic treatment must be instituted conjointly. Never forget to ascertain whether the discharge is acid, alkaline or neutral. If it is extremely acid, alkaline solutions should be employed. In leucorrhea of vaginal or cervical origin, copious hot antiseptic and astringent douches and the subsequent application of a suspension of Bulgarian-bacillus culture (galactenzyme) or gauze saturated with galactenzyme bouillon, will prove helpful. If you will consult the more recent works on gynecology, for instance, Ashton’s “Practice of Gynecology” or Bandler’s “Medical Gynecology,” you will secure all the information we could give you; however, you will not find the term “leucorrhea” in the indexes. In fact, no modern writer offers a “treatment for leucorrhea.” Consequently, to look for a “specific,” is, to search for the philosopher’s stone—which “is not,” and never will be.

If you care to send a specimen of discharge, and submit a clear report upon the vaginal, uterine, cervical, as well as the general physical conditions in any particularly rebellious case (with, preferably, a specimen of urine—4 ounces from the 24-hour output, stating the total quantity voided), we shall be pleased to aid you to the extent of our ability.

QUERY 6038.—“Death Following Abortifacients.” D., Tennessee, attended a young

woman who was suffering from what he believed to be mercurial poisoning, pronounced symptoms of which, except fetor of breath and bloody stools, she displayed, notably ulceration of the gums, cheeks, tonsils, and palate, together with considerable sloughing and hemorrhage from them. Her stomach and intestines were inflamed and the abdomen enormously swollen. She was three months pregnant and was trying to rid herself without the knowledge of her family. She died at the expiration of two weeks. Before dying she confessed and said she had been taking sulphur and buttermilk for several days. After her death we found that she also had been drinking a decoction of mistletoe for three or four days.

"What effect," D. asks, "would the sulphur and buttermilk and the mistletoe have produced? Was there justification for pronouncing the condition mercurial poisoning when there was no knowledge of her having taken the drug? The stomach was examined and no trace of mercury found, but the eroded and congested condition of the mucosa showed that she had taken some irritant poison."

We regret to say that it is impossible to extend you any really helpful assistance in view of our limited information about the general conditions. However, sulphur and buttermilk alone would not cause poisoning; the combination certainly could not produce ulceration of the mucosa of the mouth. At most, large quantities of gas might be generated and cause abdominal distention, and undoubtedly it would act as a laxative.

However, a strong decoction of mistletoe would prove harmful. The action of this epiphyte has not been closely studied, and opinions vary, some claiming it to be a reliable oxytocic, while others deny this. So as to its property as a strong nervine. While it is not an abortifacient it is an irritant poison and diaphoretic, full doses causing vomiting, catharsis, tenesmus, prostration, and sometimes bloody stools; and, in lethal dosage, coma and convulsions ending in death. Preparations of the fresh plant are most active.

As an oxytocic, Ellingwood and other writers believe a good preparation of mistletoe to be more effective and safer in some respects than ergot. French clinicians recommend guipsin, the active principle of mistletoe, in arteriosclerosis, nephritis, and other conditions where there is circulatory hypertension.

It is more than possible that the edematous and congested condition of the enteric and

gastric mucosa of your patient was caused by the mistletoe. As we understand it, however, this drug had been used for only three or four days, whereas ulceration of gums, cheeks, tonsils, and palate had been present for some time. On the whole, it is reasonable to suppose that some other irritant poison had been taken by the young woman at an earlier period. A girl in her condition ready to swallow sulphur and buttermilk and decoctions of mistletoe to get rid of the product of conception would take anything she might be told would produce abortion. While she confessed to the use of the mistletoe, she probably omitted to mention the use of the drug which produced the symptoms leading you to treat her for mercurialism.

Had mercury in any form been taken in quantity, traces unquestionably would have been discovered in the viscera. From what you tell us, we surmise that the young woman's condition was not known until shortly before she died. What was found—had there been any attempt at instrumental interference?

As to the diagnosis: The mere fact that ulceration of gums, buccal mucosa, tonsils, and palate existed would not justify a physician in making a positive diagnosis of mercurial poisoning; still, the treatment usually instituted for such condition would not prove injurious to the individual.

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QUERY 6039.—"Intravesical Hemorrhage of Obscure Origin." H. S., Idaho, describes what he considers "one of the most difficult problems a physician ever had to solve," and the patient's recovery "a miracle." The patient was an old veterinary surgeon who tired of the work and, so, tried prospecting and accepted any kind of farm work offering. One day in October, the correspondent was called out to a ranch and there "found this man in much pain, with abdomen greatly distended, and unable to pass urine. This was 3 o'clock in the afternoon. It developed that he had been purging constantly since about 8:30 that morning, and "he had strained so hard that he began to suffer in his abdomen and his water stopped," as he put it. The doctor continues:

"Examination revealed an enlarged bladder. A catheter could not be passed, and, not liking his quarters, I at once moved the man to my home, summoned a nurse and set to work. It was impossible to get a rubber catheter into the bladder, and I had to resort to a metal one. After thirty minutes' work, I succeeded and, to my surprise, the catheter

plugged up with blood clots, which I had to draw out with a wire. When I got a steady flow, there came exactly one-half gallon of blood from the bladder; and then the pain ceased. However, the bladder would fill up again, when the suffering was awful. The odor of this blood was horrid. The patient's temperature gradually rose to 102° up to 106° F., and at times even higher. The hemorrhage continued, and the patient gradually got worse.

"We catheterized three times in each twenty-four hours, and always with the same result; namely, an issue of clotted blood of a dark color. On the third day, there began to pass particles of the prostate gland, some as long as one-half inch long and of a thickness just to pass through the catheter. This continued for about five days; at every catheterization we would get pieces of the gland.

"On the fifteenth day, conditions were worse, the bladder was filling up much quicker. The man was in a bad state and I looked for every minute to be his last; he, too, prayed to die. I called in consultation two other doctors, who were friends of his. Together we considered carefully every symptom and discussed the advisability of operating, but decided that the patient could not stand the anesthetic. After some debate, the consultants from the city decided nothing more could be done, that it was a 'case of die'; and I really thought so myself. Still, after the two confrères had left, I set to work again, with a view to check the flow of blood.

"What I did was, to give hypodermic injections of atropine and ergot, one every two hours. In addition, I administered nitroglycerin, digitalis, and strychnine, at intervals, to support the heart. To my supreme delight, when the man was catheterized at 12 midnight, there came no blood, only the urine was barely tinged with it. I felt immensely relieved, and something told me I had the situation under control. The nurse remarked: 'Doctor, he will get well, I notice a change in his whole condition.' We remained; we were looking, every minute, for the bladder to give away under the blood pressure and the end to come quickly. But the nurse and I myself stuck to that sick man night and day, and there was not a change we did not see. He recovered.

"I diagnosed the condition as follows: A dormant carcinomatous condition of the prostate gland; the straining at stool broke this down and in so doing a blood-vessel was ruptured at the neck of the bladder or in the

prostate gland. For ten days we got nothing but blood, besides a very small amount of urine, which was clear as water. The blood and the urine did not mix during this period.

"My treatment was as follows: I gave strong stimulants, and atropine and ergot, hypodermically, every four to five hours, to control the hemorrhage; and on the tenth day I got results. The bladder was irrigated twice daily with a boric-acid solution. Aconite in small doses was given to control the fever, which on the fifth day went up to 106° F. As the man improved, I put the hypodermics further apart and cut down the stimulants. Under this treatment and careful nursing, he grew better right along; never had another hemorrhage. On the twenty-seventh day, he began urinating of his own accord, and we laid the catheter aside. Up to this time, he had had no power to urinate at all; but it came back nicely, and on the thirty-third day I discharged him.

"The man was as sound and well as he ever had been, and in ten days he gained 4 pounds. I had a letter from him several days ago, and he tells me he is feeling fine, passing his water normally, and weighs 165 pounds. It is without a doubt the most remarkable case I ever saw or treated; there were times when I would not have given one cent for his life, and the two doctors from town declared positively he would not last twenty-four hours.

"There are two things I am unable to explain or to understand; and if the editor will try to explain them I shall feel thankful to him. First, why did the blood and the urine not mix? Every time we catheterized the blood would come first, then the urine as clear as a bell. Second. Why did this hemorrhage cease so quickly upon the atropine treatment?"

In a later communication H. S., says, "The question arises, was our diagnosis right?"

I kept several pieces in alcohol for a few months, but the bottle was overturned, the alcohol leaked out and the contents dried up. I still have the pieces dried up and inclose same herewith.

The pathologist reports, "What little examination we can make of the dry material sent in shows phosphatic crystals, evidently from an alkaline urine and some shreds of dried and shriveled connective tissue that probably was covered with epithelium. We believe this to be a case, as you state, of papilloma (vesical)."